

Amazigh toponymy of Šarq Al-Andalus: methodology and preliminary remarks

Carles Múrcia
Serra Húnter Fellow of Latin Philology
Department of Classical, Romance and Semitic Philology
Universitat de Barcelona

1. Amazigh legacy in Šarq Al-Andalus: toponymy and other evidence

The presence¹ of Amazigh (Berber)² communities in Šarq Al-Andalus³ during the Early Middle Ages has been proven from archaeological and historiographical⁴, onomastic (personal and clan names)⁵ and linguistic points of view.⁶ However, although studies on the phonetic and morphological adaptation of Arabic toponyms have been conducted both by Romanists and Arabists⁷, the Amazigh toponymy of Šarq Al-Andalus⁸

¹ I thank Abel Soler and Ferran Esquilache for their valuable remarks about the text and Michael Maudsley for the English revision of the draft. This study presents some of the results of the R&D&I project “*Per Africae gentes, deserta atque loca: Amazigh (Berber) Toponymy in Latin and Greek Sources (AGDAL)*” (PID2020-114348GA-I00; PI: Carles Múrcia Sánchez, Institut del Pròxim Orient Antic, Universitat de Barcelona), funded by the Ministry of Science and Innovation of Spain and the State Research Agency (AEI) /10.13039/501100011033/.

² The exoglotonym *Berber* has been widely used by scholars since colonial times, having spread from French (*berbère*) to most European languages over the years. However, we prefer to use the endoglotonym *Amazigh* not only because it is the designation that used over in North Africa (even in French and English use) in scientific, social and official contexts, but also, and especially, because it is the only designation that is rooted in North Africa since antiquity in all kinds of sources (in Latin *Mazices*, in Greek *Μάζικες*, in Coptic *ⲙⲁⲤⲒⲗ* and in Libyan epigraphy MSK). Therefore, in a diachronic study like this, the denomination *Berber* –which is indeed a synonym of *Amazigh*– would be anachronistic when applied to antiquity and would only be appropriate since the Middle Ages, when it started to occur in Arabic sources.

³ On the concept of “Šarq Al-Andalus” as employed by historiographical and geographical sources, see below, § 3.

⁴ Particular thanks to the works by Guichard (1969, 1977, 1979a, 1979b, 1980a, 1980b, 1988-1989, 1990, 1993, 2001, 2005), Bazzana (1992, 2009), Bazzana & Guichard, Bazzana, Climent & Montmessin, Torrò, Esquilache (2018), Kirchner (2020) and Ortega Pérez, the latter concluding (201) that “el patrón de poblamiento instaurado durante este período [andalusí] sigue vigente en la actualidad, pues la mayor parte de los asentamientos creados entre finales del siglo VIII i XI son el origen de los municipios actuales [...] En este momento también se construyen los sistemas de irrigación de derivación fluvial de la Huerta de Valencia, que impactan sobre la conservación o eliminación de las centuriaciones de la misma manera que la reforma de la red viaria”. Moreover, M. Barceló (1986, 1995, 2001) showed that Amazighization of the Eastern Islands of Al-Andalus (Balearic Islands) was similar to that of the territories of the future Kingdom of València. For Gutiérrez Lloret (407-412), the relation between the immigration of the 8th and 9th centuries and the construction of irrigation systems along the Segura river is undeniable, although, according only to archaeological data, these constructions cannot be attributed either to Amazigh or Arab groups. Finally the PhD in osteoarchaeology carried out by de Miguel-Ibáñez (284) concludes that, among the 177 individuals buried in the *maqbara* (Muslim cemetery) of Pamplona in the 8th century, there was a significant presence of genetic markers of an African population.

⁵ See the PhD by H. de Felipe (1997) and subsequent studies (2007, 2008).

⁶ Corriente (1981, 1998a, 1999).

⁷ Coromines (1936), Moll, Sanchis Guarnier, C. Barceló (1983) and Corriente (1992).

⁸ Among studies of the Amazigh toponymy of Šarq Al-Andalus, especially of place names based on demonyms, let us cite M. Barceló (1980, 1995, 1997, 2000), Barceló & Vea, Selma, Puigvert, Ferrer & Martínez Enamorado and Martínez Enamorado & Lazarev. There are indeed some pioneering studies on the Amazigh toponymy of Al-Andalus as far back as in the late 19th century. Arabist J. Oliver Asín cited an article written in 1886 by another Arabist, J. Ribera, according to whom the origin of the name of the village of Titaguas, in the comarca of Serrans, may be attributed to the Amazigh language: “*Tit* es palabra berberisca que significa ‘fuente,’ cuya forma de plural es *Titáuan* o *Titáwan*, ‘fuentes,’ respondiendo cabalmente esta significación a las condiciones del lugar” (Oliver Asín, 39-40). In addition to the likelihood

has not yet been studied systematically or taken into account the recent progress in Amazigh historical linguistics⁹.

The imprint of Amazigh on Romance languages of the Iberian Peninsula and the Eastern Islands of Al-Andalus for the most part and that of Sicily and Southern Italy to a lesser extent was definitely deeper than the current state of research reflects.¹⁰ Until very recently, linguistic elements that could not be attributed to Arabic caused unease among both Andalusí and Sicilian Arabic scholars, and Andalusí Romance¹¹ and Italo-Romance scholars. Some Arabists currently openly assume the linguistic influence¹² of Amazigh on Andalusí Arabic, Andalusí Romance and other Romance languages of the Iberian Peninsula. The dictionary of Arabisms and akin words in Romance languages of the

of the adaptation of the Amazigh plural *Tiṭṭawen* to the Romance *Titaguas* by popular etymology and to the existence of several sources (to which healing properties have been attributed, i.e., the Font de l'Or, that of Hontanar, that of Rebollo and that of Zarza), Titaguas was in the 13th century under the jurisdiction of Alpuente, which had been constituted as a small independent emirate during the time of the Taifas and was under the sovereignty of the Almoravids at the beginning of the 12th century and under that of the Almohads until the Catalan-Aragonese conquest. The etymology of the toponym as proposed by J. Ribera is thus solid enough. From Andalusia, let us cite the studies on the Serranía de Ronda by Martínez Enamorado & Chavarría Vargas, Martínez Enamorado (2013a, 2020). Martínez Enamorado is about to publish a monograph devoted to the *kūra* of Takurunna (forthcoming). Most of the Amazigh toponymy of Al-Andalus is still to be explored, mostly in the regions where settlements of Amazigh communities are indicated by historiographical evidence, tribal toponymy and other kinds of clues, as is the case of the marches (i.e., the border regions, see Miguel-Ibáñez, Sarr 2021), roughly all the territory of modern Portugal (with the exception of Beja), the valleys of Guadiana and Tajo/Tejo and the highlands around them, the Sierra Morena, the regions of Guadalajara and Medinaceli, the Serranía de Cuenca, the mountains of Teruel and Albaracín (see Bosh Vilà 1959) and the whole Cordillera Bética (mountains of Jaén and the Sierra Nevada, besides the aforementioned Serranía de Ronda).

⁹ See updated reports on Amazigh historical linguistics in van Putten, Kossmann (2020b, 2020c) and Múrcia (2022c).

¹⁰ For historical reasons it can be assumed that the influence of Amazigh was far more important in the Iberian Peninsula than in the Italian Peninsula and Sicily given that, whereas the massive influx of Amazigh agnatic groups into the Iberian Peninsula started in 711, i.e., only forty years after the establishment of an Arab command in Ifríqiya (former Africa Proconsularis) and hence after limited exposure to Arabic for a couple of generations, the arrival of Amazigh groups in the territories of the former Magna Graecia did not start until 827, and finished in 902; the shorter exposure to Arabic than that of the settlers of Al-Andalus means that the imprint of the initial language on Italo-Romance languages was presumably less deep. See the sociolinguistic considerations presented by Corriente (1999, 61-62) about that event. Maltese, which is ultimately a direct heir of Sicilian Arabic, does not display many direct Amazighisms; borrowings from Amazigh have entered Maltese mostly through Maghrebi Arabic, as recently shown by Souag (2020).

¹¹ The denomination *Andalusí Romance* as employed by Corriente is to be preferred over the traditional *Mozarabic* in linguistic studies –especially since the influential monograph by Simonet (1888)– because that of “Mozarabs” is an ethnic concept referring to Christians living under Andalusí domination. According to the PhD by Aillet (310-316), Mozarabic communities were linguistically Arabized by the 10th century, resulting in an “Arab Christian culture”. See the sociolinguistic discussion below, § 6.

¹² The linguistic situation in Al-Andalus according to archaeological, historiographical and onomastic studies by authors such as P. Guichard and H. de Felipe (among others that have been cited above, in n. 4-6) allows the following assumption: “Se puede afirmar por mera estadística demográfica que la mayoría de los hispanos que se convirtieron en andalusíes tuvieron que aprender el árabe de boca de bereberes bilingües” (Corriente 1999, 60). Likewise, “we can conjecture that the Berbers who first arrived in Al-Andalus were hardly Arabized, either linguistically and culturally. At the beginning, these Berbers, having just arrived in a new territory, could not by themselves take an active part in Arabization, as they were not in any condition to do so” (de Felipe 2008, 29-30). The text cited by the author (*loc. cit.*) based of several sources is relevant in this respect; according to this text the Umayyad ‘Abd al-Rahmān ibn Mu‘āwiya arrived in Al-Andalus in 755 with the aid of Berber families from the Maghreb, who were his clients; he benefited from the fact that these families spoke the same language (Berber) as the families settled in Al-Andalus from whom he asked for support in order to fight against his political enemy, Yūsuf al-Fihri, who was Umayyad as well.

Iberian Peninsula by F. Corriente, published in 1999 in its first edition, was a landmark in this respect¹³. This dictionary contains over sixty lexical Amazighisms of the Romance languages of the Iberian Peninsula¹⁴, whereas the Andalusi Arabic dictionary by the same author (Corriente 1997) contains around fifty lexical Amazighisms in Andalusi Arabic. However, both quantitatively and qualitatively, there is still a lot to be said on the subject¹⁵ given that Andalusi Arabic is the only mediaeval Arabic dialect with a significant corpus of texts, which have been exploited lexicographically and grammatically by Corriente¹⁶.

Therefore, it could be stated that the scepticism –particularly rampant in the 1980s¹⁷– towards the theses of Guichard, followed afterwards by many other scholars, on the Berber identity of human settlements in Šarq Al-Andalus during the Early Middle Ages has faded away within scholarship in light of the aforementioned evidence, some of this being relatively recent. Nevertheless, due to inertia, a degree of reluctance to accept the linguistic importance of Amazigh still persists in some academic spheres because of the lack of integration of Amazigh studies into the formative itinerary of specialists in the Andalusi period, which has been dealt with mostly by Arabists, Romanists and mediaeval archaeologists and historians.

2. Methodology of study of Amazigh toponymy of Šarq Al-Andalus

Systematic inquiries should be conducted in the regions and *comarques* (historical territories that correspond to geographical spaces) where there are external clues indicating the presence of Amazigh settlements since the Early Middle Ages. The most promising areas for such inquiries are the Vall d’Uixó, the basins of the Segre, Cinca and lower Ebre, and Serranía de Cuenca and Sierra de Albarracín. Additional inquiries should be conducted in the remaining regions and *comarques* of Šarq Al-Andalus. It is easier to make progress in this field of research if one starts with the most certain Amazigh

¹³ The author was conscious of the importance of his dictionary, as he stated that “se reconoce por primera vez el papel relativamente importante del bereber” (Corriente 1999, 13).

¹⁴ Some of these Amazighisms were proposed in Corriente (1981). We have monographically studied some other Amazighisms in Múrcia (2011a, vol. 1, § V.17, 464-472).

¹⁵ In addition to lexical influences, which attract the most attention, there are phonetic and morphological influences that have been equally neglected and that allow a satisfactory understanding of some of the greatest “enigmata” of Andalusi Arabic and Andalusi Romance: (1) In syllabification, the same shaping of Maghrebi Arabic words according to the syllable rules of the Amazigh (Elmedlaoui; Múrcia 2021, § II.1.5) substratum and adstratum appears to have occurred similarly in Andalusi Arabic, e.g., the loss of vocal length contrast –absent in Northern Amazigh– according to Corriente (1999, 42, n. 49); notwithstanding, see the relevant objections by Kossmann (2013, 171-174). (2) In phonology, Andalusi Arabic *t* is voiced (*d*) and only stays voiceless when it is geminate (*tt*) –as is the case in Amazigh (Múrcia 2021, § II.1.3.1)–, according to Corriente (1999, 29-30, n. 23). (3) In morphosyntax, the long-debated issue of agglutination of the article in Arabisms of the Romance language of the Iberian Peninsula is adequately solved if we take into account that, since in Amazigh there is no article, Andalusi communities –who were indeed Arabized Amazigh and Romance populations, as we will see below, § 6– agglutinated the article in borrowings from Arabic in the first stage and they did the same when they switched to Arabic language in later stages (see *idem* 1999, 59). (4) In phonology and lexicon, some “irregular” loanwords from Andalusi Arabic into Romance are not considered as such if they were borrowed through Amazigh, as in the remarkable case of *masġid*, which entered Andalusi Romance as a feminine noun (and not as a masculine one, as it is in Arabic) and with an occlusive treatment of the Arabic *-ġ-* [dʒ] / [ʒ] > *-qu-* /k/, phoneme that did not exist in mediaeval Amazigh; hence, the Catalan and Galician-Portuguese *mesquita* and Castilian *mezquita* could be explained as an Andalusi Arabic morphological adaptation of Amazigh (*ti-*)*məzġida*, which was certainly one of the earliest borrowings from Arabic into Amazigh, in the time when the Islamization of Northern African populations was carried out in Amazigh, as described by van den Boogert (1997) and Kossmann.

¹⁶ Corriente (1992) (grammar of Andalusi Arabic) and *idem* (1997) (dictionary of Andalusi Arabic).

¹⁷ See the studies by C. Barceló (1983, 1984, 1986, 1990), Rubiera & Epalza (1985), Rubiera (1986) and Epalza (1992).

toponyms so that the phonetic and morphological adaptation rules can be laid out and the semantic procedures of place designation become clearer; hence a *clarum per clarius* approach is much more promising than a *obscurum per obscurius* one. Linguistic analyses of toponyms must come with historical and geographical contextualization, so that philological sources in which toponyms appear are exploited in parallel with a topographical description of the places named by the toponyms under consideration and with regard to the *realia* data (botanics, geology, technology, culture) linked with the toponyms.

The toponyms of Šarq Al-Andalus that can be identified as Amazigh should be divided into three categories based on the following criteria: (1) In *tribal toponymy*, place names are based on demonyms that correspond to major segments of a segmentary social structure, that is, confederations, tribes and fractions. (2) In *clan-based toponymy*, place names are based on demonyms that correspond to minor segments of a segmentary social structure, that is, clans, lineages and extended families¹⁸. (3) In *geographical toponymy*, place names are based on common lexicon and designate ravines, gullies, cliffs, hills, paths, meadows, forests, villages, hamlets, castles, creeks, sources, springs, ditches, canals, etc.; they are usually *microtoponyms*.

For linguistic studies, the “major” toponymy of towns and villages is as valuable as oronymy, hydronymy and microtoponymy. However, it is in the field of rural toponymy where Amazigh elements can be identified most easily and where linguistic analyses are most fruitful. We have already reported this typology of toponymic inquiries elsewhere, with case studies of each of these categories. Toponymic records should adopt the following structure: (1) geographic location of the toponym; (2) records of the variants of the toponym; (3) linguistic and etymological analysis of the toponym; (4) contextual motivation of the toponym; and (5) conclusion.

3. The Amazigh settlement of Šarq Al-Andalus

Arabic sources were strikingly almost completely silent for three centuries (8th-10th) about the eastern part of d’Al-Andalus, *Šarq Al-Andalus*, which comprised the territories that would become Murcia, part of Almería (for some time), the Kingdom of València, New Catalonia (south of the Llobregat river), part of Cuenca (particularly the Serranía de Cuenca and neighbouring areas), the mountains of Teruel (comprising the Sierra de Albarracín) and, from the 10th century onwards, the Eastern Islands of Al-Andalus (Balearic Islands)¹⁹. Moreover, only brief studies have been conducted using these sources²⁰, and no doctoral dissertation or in-depth research has been carried out to date on Arabic sources of Šarq Al-Andalus in the Early Middle Ages.

The oldest Arab geographers that talk about Al-Andalus do not mention any town in Šarq Al-Andalus, which was completely deurbanized until the middle of the 10th century²¹, and only refer –without even naming them– to castles, hamlets and small villages. Important towns in Roman times like *Valentia* (València), *Saguntium* (Sagunt/Morvedre) and *Carthago Nova* (Cartagena), and smaller ones such as *Dertosa*

¹⁸ On these anthropological concepts, there below, § 4.

¹⁹ For the geographic extent of the *kūra* of Tudmīr, which included Murcia, Alacant, part of Almería and part of Albacete, see the map by Gutiérrez Lloret (2019, 402). For the geographical extent of Šarq Al-Andalus comprising a large part of Cuenca and Teruel according to Arabic sources, see Bosch Vilà (1964, 24-25), and Torró.

²⁰ Arabic sources on Šarq Al-Andalus in these centuries were studied by Guichard (1969), from whom we take the relevant data for our purpose. Some of the facts presented in this article were later developed in his paradigmatic PhD research (Guichard 1977).

²¹ On the overall deurbanization of pre-Andalusi València, see the recent PhD by Ortega Pérez.

(Tortosa), *Dianium* (Dénia), *Saetabis* (Xàtiva) and *Aurariola* (Oriola), were modest hamlets and did not begin to develop into towns until the 11th century. The whole of this region endured massive depopulation in the aftermath of the 3rd century, which resulted in the decline of urban life. Between late antiquity and the Visigothic period (550 to 750 CE) the urban population from *Lucentum* (Alacant) to *Dertosa* (Tortosa) dwindled in number because of the Justinianic plague of 542 CE (and successive waves) and the fleeing of survivors to the hinterland. Old *Valentia* became *Madīna al-Turāb*, that is, “Dust City,” in Arabic sources²². The old coastal route of Via Augusta was abandoned in favour of the Córdoba–Calatrava–Guadalajara–Zaragoza route²³.

Nowhere else was there such a small proportion of agnatic groups of Arabic descent as in Šarq Al-Andalus. Those who claimed to be of Arabic lineage were often not²⁴. The case of Tudmīr is different, as it was directly subject to the government of Córdoba from 743 CE until the foundation of the city of Murcia in 831 CE, and thus was the only centre of state control of Šarq Al-Andalus for a substantial part of the Andalusi period²⁵.

The provenance of the first wave of migration of Amazigh groups that settled in Al-Andalus is diverse, but was mostly of eastern background. In an exhaustive and well-documented historiographical study, geohistorian G. Lazarev succeeded in tracing the itinerary that these groups followed before they arrived in the Iberian Peninsula²⁶: Firstly, the Banī Fātan²⁷, which comprised Matġāra, Madyūna²⁸ and Malzūza (a branch of the Maġīla), native peoples from southern Byzacena and northwest Tripolitania, reached the Iberian Peninsula from western Mauretania Cesariensis, to where they had been pushed by the Arab-Muslim conquerors. Secondly, the Miknāsa²⁹ and the Awrāba³⁰, coming from southern Byzacena (although Awrāba’s homeland was indeed *Aurarius mons* in Byzantine sources), arrived in the Iberian Peninsula from the Moulouya valley and the

²² See Rubiera (1988, 33).

²³ See Guichard (1977, 192).

²⁴ See Guichard (1969, 109-111).

²⁵ Guichard (1977, 351).

²⁶ Lazarev (2021, 93).

²⁷ The toponyms *Benifato* (Marina Baixa), *Benifat* (Safor) and *Binifat* (Mallorca) may come from this ethnonym.

²⁸ The toponym *Mediona* (Alt Penedès), written as *Midiona*, *Midiuna* and *Mediona* in texts that go back to the 10th century (*OnCat* 5, 243, col. a, l. 44-49), comes from the ethnonym Madyūna, as well as another toponym *Mediona* that the *Llibre del Repartiment de València* places near Gandia and Oliva, i.e., in the comarca of Safor. For the Madyūna tribe, see Martínez Enamorado & Lazarev.

²⁹ The Miknāsa are known for founding the town of Sijilmasa in 757 CE. As a matter of fact, there are several towns and villages in North Africa that owe their name to the Miknāsa, distinctly the town of Meknès in Morocco, which was founded in later times, in the 11th century, see Khelifa (2010c, 5021). In Šarq Al-Andalus they have left imprints not only in the important town of *Mequinesa* (Baix Cinca, formerly named *Migneza*, *Miqneza*, *Michineza* and *Mechineza*), but also in *Mequinença/Mequiniça* (hamlet in Marina Alta between Llíber and Xaló rivers). Ibn Ḥaldūn classified the Miknāsa among the Zanāta group, but this subgrouping is clearly secondary. The Miknāsa and the Banī Fātan, which renounced their faith in Islam “twelve” times before their ultimate conversion, see Lazarev (2021, 87), were pioneers in the emigration of eastern tribes from the east to the west long before the rest of the so-called (by Arab historians) Zanāta tribes.

³⁰ The Awarba/Awrāba were a tribe of Barānis stock that headed the confederation led by Kusayla that confronted the Arab-Muslim invasion of Byzacena between 683 and 688 CE. Because of the defeat against the Arab army, this tribe sought retreat westwards, in Mauretania Tingitana, from where it crossed the strait of Gibraltar towards Al-Andalus, see Lazarev (2021, 77-81), where it left quite a few toponymic traces, such as *Oliva* (formerly *Oriba*, in Safor), *Orba* (Marina Baixa), *Orba* and *Orbeta* (Marina Alta). Nowadays, there is still a tribe named *Ouerba* north of Taza that comes from ancient Awarba/Awrāba, see Morizot (1990, 1194).

Fez region, respectively, also having been pushed by the advance of the Arab-Muslim conquest. Thirdly, the Hawwāra³¹ and the Nafzāwa³² came from Tripolitania and from the eastern bank of the Chott el Djerid (south of Byzacena), respectively, although the *Urheimat* of the Hawwāra was in Central Sahara. Fourthly, the Ġumāra³³ and the Masmūda were native peoples of Mauretania Tingitana. Shortly after, the Lawāta and the Mazāta joined the other Amazigh groups from Cyrenaica. In the 8th century, the Zanāta³⁴, who played an increasingly important role both in Northern Africa and in Al-Andalus from the 10th century onwards, were but a modest tribe in coastal Tripolitania. Likewise, the Ṣanhāġa only came to prominence in Al-Andalus in the Almoravid period³⁵.

Oriental geographer al-Ya‘qūbī (9th century), who was one of the few writers that showed a true ethnographic interest in this area, said about Šarq Al-Andalus:

If we go westwards from Tortosa [according to the orientation that Arabic geographers gave to the Iberian Peninsula], we arrive in a country named Balansiya. It is a large and beautiful region in which Berber tribes that do not acknowledge the authority of the Umayyad settled (*nazala qabā’il al-barbar*). These Berbers own in this region a great river called Šuqr [Xúquer]³⁶.

Chronologically, from the beginning of the Andalusi period, it was Amazigh groups who settled in large parts of Xàtiva, Alzira and València and the inner mountain areas of

³¹ As Lazarev noted (2021, 61-62), the Hawwāra were the most widespread tribal group, since, in addition to Tripolitania, they could be found in western Egypt, Darfur, Libyan Sahara, Fazzān and across all regions of Roman Africa before their arrival on the Iberian Peninsula. Sources ascribe to the Hawwāra seventeen different tribes of uneven sizes: many small tribes of Tripolitania joined the great pastoralist and nomadic tribe of the Banū Kamlān, including the Malīla –which emigrated to the eastern Rif–, the Waġra –which named a river in Pre-Rif–, the Tarhūna –which are still present nowadays in Libya and southeastern Tunisia– and the stockbreeding Warfāla, which played a hegemonic role in eastern Tripolitania and was the main component of the Hawwāra confederation. The toponymic imprint of Hawwāra in Šarq Al-Andalus is immense, as is *Favara*, the name of the important and ancient *séquia* that crossed Albal, Alfafar, Benetússer, Massanassa, Mislata, Paiporta, Quart de Poblet and València, *Favara*, a village in Matarranya (Franja d’Aragó), les *Favares*, a *partida* of Cabassers (Priorat), *Favara*, a *partida* of the valleys of Pego (Marina Alta), *Favara*, an ancient *alqueria* of Bocairent (Vall d’Albaida) and the microtoponym *Favara*, which refers to a small vegetable garden on a cliff (Maestrat).

³² Ṭāriq ibn Ziyād, who is believed to have been a freed *mawla* of Mūsa ibn Nuṣayr, to whom Arabic sources accredited the conquest of the Iberian Peninsula, was of Nafzāwa lineage, precisely the Wulhāsa tribe. See Lazarev 2021, 54. The Marnīsa is a Nafzāwa group that had settled in Central Rif before leaving a deep imprint in Šarq Al-Andalus, such as *Mernissa* and *Vernissa* (two domains belonging to Santa Margalida and Llucmajor, in Mallorca), *Bernissa* (*alqueria* of the Vall de Xaló, Marina Alta), *Vernissa* (domain of Catamarruc, Comtat), *Vernissa* (*séquia* and *alqueria* of Gandia, Safor), *Vernissa* (mountain near the castle of Xàtiva, Costera), *Mernissa* (plain of Vall de Pop, Marina Alta) and *Merniça* (*alqueria* of Parcent, also in Vall de Pop, according to documents from 1249), not to mention numerous microtoponyms of *Vernissa* (path, source, well, mountain pass, stream, gutter) in these areas.

³³ The Ġumāra constitutes a linguistic enclave of Masmūda stock in the Rif, where they are surrounded by Riffian tribes (of Zanāta stock) and without direct contact with the Ṣanhāġa of Srayr tribes, which, as their name indicates, are of Ṣanhāġa/Aznag stock. See Mourigh, Lazarev (2021, 194-195) and Gutova (14-50).

³⁴ Toponymic traces of Zanāta (*Atzeneta* d’Albaida, *Atzeneta* del Maestrat, *Atzeneta* de la Vall de Guadalest and *Zeneta* in Murcia) may belong to the 10th and 11th centuries.

³⁵ The many place names that come from this ethnonym may date from the 12th century, such as *Senija* et *Senijola* (Marina Alta), *Rahal Zaneygí* (in the *Llibre del Repartiment de València* among the *rafals* belonging to Xaló (Marina Alta)), *Çeneja* (ancient *alqueria* of Vall d’Uixó), *Soneja* (Alt Palància), *Cehegín* (Murcia) and the port of *Sanitja* (Menorca).

³⁶ Cited by Guichard (1969, 124). Shortly after the conquest of James I, the historian of Balansiya of Yemeni descent who settled in Onda Ibn al-Abbār (13th century) referred to the “Berbers of Balansiya” from his dwelling in Bugia (*Kitāb al-hulla al-siyarā*, 275, I, ed. Ḥusayn Mu’nis, cited *apud* Tahiri, 37).

Šarq Al-Andalus. According to Arabic sources, groups belonging to the great confederation of the Hawwāra³⁷ prevailed in the Túria valley from the coast to the inner mountains, where one of their groups, the Banī Zannūn, built a fortress in the enclave of Walmū (modern Huélamo, in the Serranía de Cuenca)³⁸. The chiefs and a significant part of the group who conquered Sicily in 827 CE were Hawwāra from Balansiya³⁹. The Nafza⁴⁰ predominated in the northern flank (Vall d'Uixó) and southern flank (Xàtiva and Teruel) of the Hawwāra⁴¹. In the territory of Tortosa there was a district or village named Maġrāwa⁴².

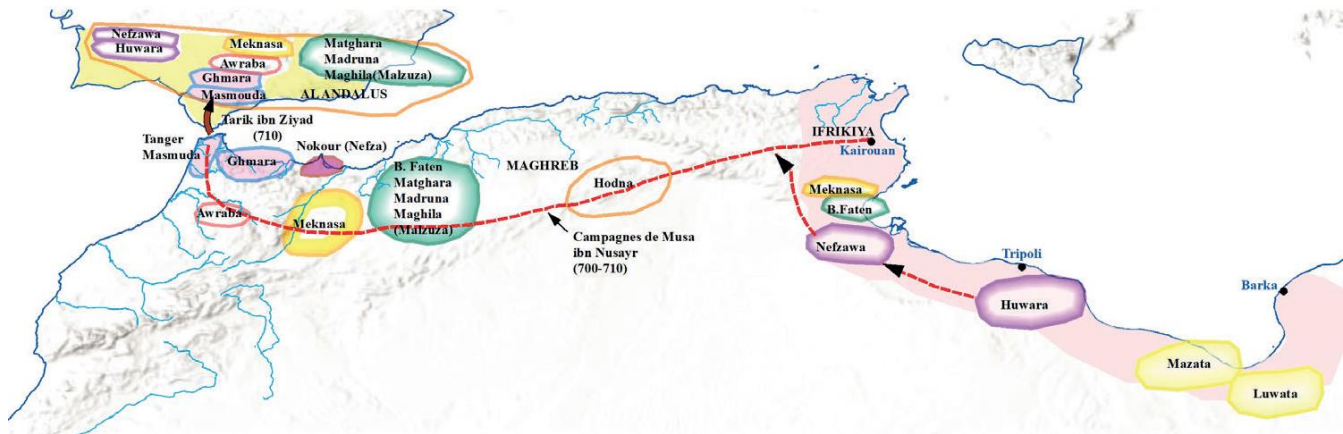


Figure 1. Northern African location of the main Amazigh confederations and tribes at the time of their arrival in Al-Andalus. Source: Lazarev (2021, map n. 4 in annex).

³⁷ See above, note 33.

³⁸ See Guichard (1969, 138-139). The Amazigh settlement of the *kūra* of Šantabariya, to which *Walmū* belonged, as well as that of the Sierra de Albarracín, was the subject of the monograph by Bosch Vilá (1959).

³⁹ See Guichard (1969, 145, n. 1).

⁴⁰ Some mediaeval Arabic sources (mainly al-Bakrī) distinguish between Nafza and Nafzāwa, but other sources consider both to be the same tribe. See Khelifa (2012a) and Troussset. However, Lazarev (2021, 90) established that the Nafza were a branch of the Nafzāwa.

⁴¹ Guichard (1969, 139).

⁴² According to al-Bakrī, the Maġrāwa came from the region between Septem Fratres and Tamuda, in northern Mauretania Tingitana. See Khelifa (2010a). But this location is not clear, since in the mid 10th century they were to be found in much of the territory of ancient Mauretania Caesariensis. Unless this is a case of homonymy, the Maġrāwa from València may be of Zanāta descent. In the 7th century, the Zanāta were just a small tribe of the coastal steppes of Tripolitania, northeast of the Nafzāwa. A faction of the Zanāta, the Maġrāwa, succeeded in federating under the tribal name of Zanāta the set of tribes from the steppes of Central Tamazgha and from the oases during the 8th and 9th centuries. They were preceded by the Banī Ifran, who left some of their factions throughout Byzacena. Genealogical “Zenatization” of the populations confederated by the Maġrāwa was achieved in the 10th century in opposition to the political space of the Fatimides at an early stage and to the Zirides afterwards. The cause of these migrations was the advance of the Arab-Muslim invasion. The Marinids in Morocco and the Abdelwadids in Tlemcen enhanced the Zenatization of the region, from which the Hawwāra, the Mazāta and the Sadrāta escaped, presumably for their adherence to Ibadism. Some authors have even raised the issue of ancient Zenatization, already in Roman times, due to the pervasiveness *intra limitem* of liminal tribes from the steppes, as in the case of the pastoralist *Gaetuli*. The linguistic implications of this issue, which we discuss below, § 6, are not at all clear.

However, there are no historiographical references to most Amazigh settlements, meaning that toponyms referring to tribal segments are the main and often the only evidence of these settlements. Demographic Amazighization strengthened the rural economy, which was predominant until the 11th century, in contrast to other regions of Al-Andalus where urban life arose quickly and steadily. Most families of genuine Arabic descent arrived in Šarq Al-Andalus from the 12th and 13th centuries onwards, when they were expelled from Córdoba and the high and middle Ebre valley because of the civil unrest of the Caliphate period and the Christian conquest of the 12th century⁴³. Administratively, dependency on Tudmir and northern marches was not effective, although some Amazigh chiefs became clients of the Arabic lineage of the Anšār, from whom some Amazigh groups claimed descent⁴⁴.

4. Amazigh communities of Šarq Al-Andalus

The new Amazigh settlers that had come mostly from eastern regions of Tamazgha (or, as it was named at the time of Herodotus, Libya, and, until recent times, Barbary)⁴⁵ during the Early Middle Ages (Tripolitania, Cyrenaica, Byzacena and Central Sahara), had previously settled in western regions (Mauretania Tingitana and Mauretania Caesariensis), and did not arrive individually in Al-Andalus but instead arrived in agnatic groups, which included children, women and elders⁴⁶.

On the one hand, Amazigh groups who moved to the northern side of the Mediterranean basin brought with them a tribal organization based on segmentary lineages or *segmentarity*⁴⁷, according to which a true or fictitious eponymous ancestor names a tribe, which is then segmented into an undetermined number of cantons or fractions, which are in turn segmented into clans that are divided into lineages, which are then segmented into extended families and so on down to the level of the conjugal family; the quinary (or base-5) system is referential, but is not strictly observed.

On the other hand, Amazigh groups eventually assimilated indigenous populations of Šarq Al-Andalus within their segmentary lineages before the 11th century after several generations of segregated social co-habitation, as Amazighs only married within their

⁴³ See Guichard (1969, 133).

⁴⁴ See Guichard (1969, 130-131, 135-137).

⁴⁵ *Barbaria*, as referred to *Tamazgha*, has been a common designation in Catalan since the 13th century (long before it appeared in other languages of the Iberian Peninsula) in Catalan chronicles and in mediaeval documents. According to Ramon Pujades (personal communication), the toponym *Barbaria* appears in Catalan in reference to Northern Africa west of Egypt in all the *portolans* and *cartes portolanes* (portolan charts) that have been preserved. It is known to apply to the region in genitive constructions like *Trípoli de Barbaria* (as opposed to *Trípoli de Síria*) in all the portolan charts of the 14th and 15th centuries. The toponym entered the portolan cartography from written portolan books. As a matter of fact, it is featured in the oldest portolan manuscript that has been preserved, the *Liber de existencia riveriarum et forma maris nostri Mediterranei* (around 1200 CE), compiled in Pisa from previous portolan drafts. In addition, the best known text, *Lo compasso de navegare*, compiled in 1286 from earlier drafts and translated into Catalan in the 14th century, refers to *Barbaria*. Accordingly, the use of the toponym in reference to Northern Africa was made common by merchants from Liguria (Genoa) and Tuscany (Pisa and Livorno) in the 12th century and thereafter was transferred to Catalan sailors in the 13th century through the portolans and especially the portolan charts composed in Genoa in the 13th century and was soon imported to Mallorca, where a slow process of translation of Italianized toponymy from original drafts into Catalan culminated in the 15th century. For details, see Pujades (2007).

⁴⁶ This is one of the conclusions reached in the PhD of P. Guichard, especially Guichard (1977, 267-273), confirmed later on by the studies cited *supra*, § 1, especially in n. 4. See Martínez Enamorado (2019b) as well.

⁴⁷ Anthropologist David M. Hart developed his theory of segmentary systems in Amazigh society in many studies, such as Hart (1967).

tribes; massive social assimilation only took place when indigenous populations left their Romance language, their Christian religion and the cognatic social structure of Roman and Visigothic times⁴⁸. The segmentary system fits well with the population growth of the rural communities of the river valleys of Šarq Al-Andalus, whose water systems expanded very little, as shown by the geographical discontinuity of tribal and clan-based settlements and the toponymic split (also known as reduplication). The fission of segments implies that a group split and that the new agnatic segment thus created moved or relocated to a new nearby or distant territory, where the group created a new production space and ultimately a new settlement⁴⁹. Initially, segmentary activity took place between North Africa and Al-Andalus, but subsequently it took place over shorter distances. Immigration into the Eastern Islands of Al-Andalus from 902 CE onwards was, according to M. Barceló, dense, chronologically compact and short-term and came mostly from the territories of Balansiya⁵⁰.

In this study the concept of “agnatic group” is often used to avoid references to specific segments such as confederation, tribe, canton or fraction, clan, lineage and extended family, because the main principles of the segmentary structure of an agnatic group are applicable to every segmentation level, that is, kinship is established unilaterally in a way that can be either patrilineal -as was the case of Arabs and probably most Amazigh groups- or matrilineal. The fact that western Amazigh groups (i.e. Šanhāġa/Iznagn) that constitute the Almoravids and modern Tuareg people of Central Sahara are usually matrilinear, i.e., refer to one’s maternal side, is generally assumed to be an indication of matrilinear kinship⁵¹.

⁴⁸ The assimilation of the indigenous society of Šarq Al-Andalus into an Amazigh tribal social structure is dealt with in several studies by archaeologist M. Barceló. See M. Barceló (1995, 2001).

⁴⁹ See Esquilache (2018, 77).

⁵⁰ M. Barceló (1995, 26, 38). See also Kirchner (2019).

⁵¹ On Amazigh agnatism, see Claudot-Hawad (2010, 2015). Matrilinear kinship has been traditionally considered Proto-Amazigh taking into account the kinship terminology in all dialectal Amazigh groups (northern, eastern, southern or Tuareg and western): The concept of ‘brother’ is designated *g^mma* (with the corresponding cognate forms), which literally means “my mother’s son,” the concept of ‘brothers’/‘brethren’ is designated *aytma*, literally “my mother’s sons,” ‘sister’ is *ultma*, literally “my mother’s daughter,” ‘sisters’/‘sistren’ is *istma*, literally “my mother’s daughters;” in Tuareg, ‘maternal uncle’ is *āḡnāt ma*, literally “the brother of my mother,” ‘nephew’ is *tegāze* or *āg ālāt ma*, literally “the son of my mother’s daughter” and ‘niece’ is *wālāt ālāt ma*, literally “the daughter of my mother’s daughter,” see Ritter (vol. 2: 1014). Therefore, there is no designation for ‘uncle,’ ‘nephew’ or ‘niece’ that does not come from the mother’s filiation. For this reason, Amazigh dialects have borrowed from Arabic the designations for ‘paternal uncle’ as opposed to ‘maternal uncle’ and for ‘paternal auntie’ as opposed to ‘maternal auntie.’ It is worth clarifying though that patrilineal kinship existed prior to the coming of Islam to North Africa as revealed in ancient Greek and Latin sources and that, accordingly, it cannot be said that patrilineal kinship in North Africa is due to Arab-Muslim influence. Actually, Souag (forthcoming) has compellingly shown that kin relatives on the mother’s side are not an evidence of matrilinear kinship; matrilinear kinship may instead be due to the fact that the father could have more than one wife; indeed, the co-wife, which is named *takna* throughout the Amazigh cluster, derives from the verb *ikniw* ‘to be twins; to be alike; to be co-wife.’ Therefore, the reference to “my mother’s son” is necessary when the individual has also siblings born to the father’s co-wife. Similarly, the Greek designation for the ‘brother,’ ἀδελφός, means etymologically ‘from the same womb;’ the inherited word for ‘brother,’ φράτηρ, could perhaps also be used for other members of the extended family. Therefore, ἀδελφός, which is morphologically an adjective, was initially used in the expression *φράτηρ ἀδελφός ‘brother proper.’ Also in Greek scholarship it has been suggested that the word derived from pre-Greek matrilinear societies, but, as in Proto-Amazigh society, ἀδελφός (as *g^mma*) may point instead to a society with co-wives or concubines. See Beekes, vol. 1, 20, *s.u.* ἀδελφός. In conclusion, Proto-Amazigh society had probably a strong patrilineal orientation complemented by matrilinear ties with the mother’s kin.

The anthropological concept of “agnatic kinship” is opposed to that of “cognatic kinship,” which is bilateral, i.e., it takes into consideration both male and female ancestors. Two persons are cognate if they are related by blood ties without distinction between the male and female lineage. It is the kinship system that prevailed in the Iberian Peninsula that the agnatic groups that came from North Africa in the 8th century encountered. By the 11th century indigenous families had probably disappeared because of the adoption of the agnatic social system, which was widespread throughout society⁵².

Figure 2. Chart of Amazigh terminology of the social segmentary system⁵³

<i>azur</i> ~ pl <i>ižuran</i>	‘kinship, origin, filiation’ (literally ‘vein’)
<i>u / g^w</i> ~ pl <i>ayt</i> (Tuareg <i>kel</i>)	‘male individual of an extended family, lineage, clan, fraction or tribe’
<i>ult</i> ~ pl <i>ist</i>	‘female individual of an extended family, lineage, clan, fraction or tribe’
<i>aqbil</i> (Tuar. <i>ayraf</i> ~ pl <i>iyərfan</i>)	‘tribal confederation’ or ‘supertribe,’ in Tuar. literally ‘constitution by assembling’
<i>taqbilt</i> (Tuar. <i>tāwšet</i>)	‘tribe,’ literally ‘the whole hand including the wrist’
<i>adrum</i> ~ pl <i>idrman</i>	‘fraction’ or ‘canton’
<i>afus</i> ~ pl <i>ifassn</i> (Tuar. <i>ayil</i>)	‘clan,’ literally ‘hand’
<i>iyss</i> ~ pl <i>iyisan</i>	‘agnatic lineage,’ literally ‘bone’
<i>ayt uxam</i> (Tuar. <i>ayiwān</i>)	‘extended family,’ literally ‘the ones from the tent’
<i>ayt taddart</i>	‘extended family,’ (literally ‘the ones from the house’)
<i>tawja</i> (Tuar. <i>ehān</i>)	‘conjugal family’
<i>takat</i>	‘fireplace,’ ‘household’
<i>takna</i>	‘co-wife’
<i>usun</i>	‘nomadic camp constituted by a group of tents laid out in circle; hamlet’
<i>tigmmi</i>	nomadic camp constituted by a group of tents laid out in circle; hamlet; house’
<i>amazir</i>	‘site of a camp’
<i>amsku</i>	‘favourable location for the settlement of a camp’
<i>axam</i>	‘nomadic tent’
<i>taddart</i>	‘house’
<i>tīyrm</i>	‘rammed-earth manor fortified by surrounding towers’
<i>tazqqa</i>	‘brick house’
<i>tadwwart</i>	‘hamlet’
<i>adwwar</i> <i>dššar</i> (Tarifit)	‘village’
<i>iyrm</i>	‘borough, walled town in solid building’
<i>agadir</i>	‘fortified barn on top of a hill’

⁵² On the indigenous kinship structures of the Iberian Peninsula during late Roman and Visigothic times, see Guichard (1977, 102-136).

⁵³ This chart is an adaptation of that in Múrcia (2011a, vol. 1, § VI.1.3.3, 514), in which the correspondence between the Latin terminology in sources from Roman Africa and tribal Paleo-Amazigh institutions is defined. Amazigh designations included in this chart do not reflect the synchronic system of any specific Amazigh group but a system more or less common to the overall Amazigh cluster in spite of certain divergences in terminology.

<i>agraw</i>	‘assembly’ (of any segmentation level)
<i>anflus</i> ~ pl <i>inflas</i>	‘notable, representative of an assembly’
<i>amyar</i> ~ pl <i>imyarn</i>	‘chief’ (of a lineage, of a clan, etc.)
<i>bab n umur</i>	‘representative of the fraction assembly’
<i>amyar n tmazirt</i>	‘territorial chief’ (generally of a fraction)
<i>amyar n ufla</i> (in ancient times and locally <i>agllid</i>)	‘supreme chief, chief of a supertribe or confederation’
<i>azrf</i> ~ pl <i>izrfan</i>	‘customary law’

A typical household of Šarq Al-Andalus comprised two or more conjugal couples and their respective children. Every conjugal family lived in one of the habitations located around a common courtyard⁵⁴. Most toponyms in *Beni-* refer to these lineages and extended families, and nowhere in Al-Andalus do such toponyms appear as densely as in Šarq Al-Andalus. The toponymy is the *clan-based toponymy* type of Amazigh toponymy of Šarq Al-Andalus (as mentioned above in § 2). More than 500 toponyms have been identified in the Valencian Country, being particularly abundant in the plains and mountain regions near València, Sagunt, Borriana, Lliria, Alzira, Gandia and Xàtiva. The same situation can be found in the Eastern Islands of Al-Andalus. In the *kūra* of Tortosa, as well as that of Oriola, there were a lot of toponyms in *Beni-* in the 11th century, shortly before the coming of the Almoravids⁵⁵.

Toponyms in *Beni-* were mostly *alqueries*⁵⁶ or humble rural communities that usually consisted of ten (fifty at most) households arranged in groups of five or ten within a valley or a small coastal plain. Some of them depended on a rural castle and others were arranged around a bigger village⁵⁷. They were common in mountain areas, far from urban centres, and in the fertile market gardens of the plains, and they lay along the gullies, mostly at the foot of slopes or in the valley bottoms, but outside floodable zones, and rarely at the top of the mountains. Every valley or slope contained an indeterminate number of *alqueries* (usually from ten to twenty) scattered along the valley, whose names were most often demonyms⁵⁸. The administrative and political structures of these *alqueries* were of the representative kind, according to the tribal paradigm described by P. Guichard: Three or four villages (i.e. ten *alqueries* consisting of four or five households each) constituted a sovereign state, which owned a territory of specified limits within the scope of a valley. Settlements lay within 600 metres of one of the main roads either side of them, such that the roads followed a radial scheme and concluded at the *alqueria* of the souk, where the rural market took place⁵⁹.

⁵⁴ See Esquilache (2018, 87-89).

⁵⁵ Guichard (1977, 328-341) was a pioneer in the study of the clan-based Amazigh toponymy of Šarq Al-Andalus in *Beni-*.

⁵⁶ An *alqueria* (from Arabic *qarya* ~ plural *qurā*) is a territory of indefinite limits constituted generally by several settlements (usually between two and seven), although there are some *alqueries* of concentrated settlements. *Alqueries* usually did not have streets and were inhabited by a single rural community known by the later sources as *aljama* (from Arabic *ġama‘a*), i.e., a community led by a council of elders that for long periods of times acted outside the agents of the state, even in certain periods where a certain state government ruled in Al-Andalus.

⁵⁷ See Esquilache (2018, 54-60).

⁵⁸ See Guichard (1977, 336-340), who presented examples from the Vall de Guadalest, Vall d’Alcalà and Vall d’Uixó. In contrast, toponyms in *Beni-* are scarce (if any) in areas where populations of indigenous descent still subsist, as in the region of Toledo and in the northern march, or in areas where significant Arab groups had settled.

⁵⁹ Guichard (1977, 340).

Between the different inhabited centres of an *alqueria*, which were each occupied by different families, there were interstices of arable lands and common pastures, even in the case of a rural community or *aljama*. The elders of the *aljama* undertook the processes of farming and cattle husbandry, and, accordingly, *alqueries* became production units. The *alqueria* was, therefore, the basic unit of Andalusí taxation, since community tributes were paid by each *alqueria*, and the sultan collected most of his tax revenues from the *aljames*⁶⁰.

During the 8th and 10th centuries there was probably a complementary exchange network between agriculturalists of the intensive irrigated lands of the coastal plains and cattlemen of the inner mountain areas. This exchange network points to the existence of transhumance routes between summer pastures in the mountains and winter pastures in the marsh areas near the sea. This network would thus have favoured contacts between groups of mainly stockbreeders from the hinterland and groups of mainly peasants of the coastal plains. It is known that the Hawwāra were present in the *Marjal de Cullera*, which is a grazing area in winter, and all over the *kūra* of Šantabariya (*Sierra de Albarracín* and *Serranía de Cuenca*) in summer, which is the origin of the transhumance routes down to the Valencian coast that existed from the Middle Ages until recent times⁶¹. Furthermore, these mountains were occupied until the Caliphate period by the Banī Zannūn, a group of mainly livestock breeders of Hawwāra kinship. Hence, the plain of Balansiya, known for its rural market of cattle and agricultural products alongside the ancient Roman and Visigothic urban centre and for its 9th century leather tanning industry, may have been an important centre of regional exchange of tribal nature between agriculturalists and cattlemen⁶².

5. The introduction of irrigation agriculture in the 8th and 9th centuries

The doctoral dissertation written by F. Esquilache (2018) and based on a thorough analysis of hydraulic archaeology and an accurate study of written sources and toponymy, made a significant contribution to our knowledge of the *Horta de València* and of the Amazigh society that created it. Previously, there was much speculation about the Roman, Visigothic or Arabic origin of the irrigated lands of Šarq Al-Andalus that have come until recent times as historical *hortes* (market gardens). However, the research conducted by Esquilache clearly showed that the irrigation of market gardens implies knowledge as diverse as water abstraction and diversion, construction of terraces, cultivation of certain plants originally from monsoon climate areas and the supply of water not only from river courses but also from underground galleries through sophisticated piped systems known in hydraulic engineering as *foggara*, as well as *efāli* (~ plural *ifālan*) and *lx̣tart* in Amazigh, *qanāt* in Arabic (*falağ* in Oman Arabic) and *kāhrēz* in Persian⁶³.

⁶⁰ Esquilache (2018, 56).

⁶¹ See Esquilache (2021) and Múrcia (2022b, 39-45).

⁶² This is one of the main conclusions reached in the PhD by F. Esquilache (Esquilache 2018, 397-398). See also the review by Múrcia (2020).

⁶³ On *foggaras*, see Gast (1997). On the diffusion of watering systems for extensive farming from the country of the Garamantes in Phazania, see Wilson, Mattingly & Sterry. In the research devoted to this system of collection and channelling of ground water, the Arabic designation *qanāt* is widespread. Comparative studies have not yet been conducted so it is not known whether these techniques of hydraulic engineering developed independently in Western Asia and in Phazania or whether these techniques spread from one place to another. The first attested case is in Oman, c. 1110-600 BC, then in Urartu and Assyria (8th century BC), Western oases of Egypt (around the 5th century BC) and Phazania since the 4th century BC but especially from the 1st century BC until the 4th century CE. See Liverani (2020, 59-60) and Wilson, Mattingly & Sterry (79-93). Liverani suggests that Oman could have been the focus of technological transfers to other regions and that east-west technological transfer was hampered not by the Libyan desert

The names of three out of the four main *séquieres* (irrigation canals) of *Horta de València* in Andalusi times refer to Amazigh tribes of eastern origin, that is, Mestalla < Mašddāla/Imšddaln (fraction of the tribe of Zuwāwa⁶⁴, which belonged to the Kutāma confederation⁶⁵, Benàger < Banī Aġġar⁶⁶ and Favara < Hawwāra⁶⁷, whereas the fourth

but by the Nile valley, taking into account the self-contained and unitary character of Egyptian civilization: “Oman was in a strategic position for major cultural contacts and disseminations in materials either basic (cultivars) or strategic for those times (metals, semi-precious stones, spices)” (Liverani 2020, 63). Watering through underground galleries that drain water by gravity from the phreatic layer is employed today in Saharan and pre-Saharan areas, in the steppes and in oases, and it was already in use in Zeugitana, Byzacena, Tripolitania and Phazania in Roman times and during the Middle Ages by the Almoravids (of Ṣanhāġa/Aznag stock) in westwards regions. Recent large-scale archaeological prospecting has brought to light the diffusion centre of this watering system in the ancient region of Phazania (modern Fazzān), where the Garamantian civilization used to practice sophisticated forms of agriculture for the harvest of wheat, barley, sorghum, cotton, grape, figs and other crops. In the zone of Wadi al-Ajal alone, to which the ancient capital *Garama* belonged, around 700 km of foggaras in approximately 700 channels of between 100 metres and 4.5 km long have been dug in a mission directed by D. Mattingly, and around another 100 foggaras in others parts of Phazania have been dug only partially, all of them associated with the Garamantian civilization. Excavations have also revealed some old tiffinagh inscriptions. These foggaras were abandoned during the early Middle Ages because of the depletion of the phreatic layer and climatic aridification of the Sahara. See the updated reports by Fentress & Wilson (55), Mattingly (2017), Wilson, Mattingly & Sterry (81-86) and Liverani (2020, 54). The Garamantes controlled the trade of Trans-Saharan routes southwards (Kanem and Chad basin), southwestwards (Ghat, Ahāġgar and Niger) and northwards (Ghadames, Golas/Bu Njem and other fortresses of Tripolitanian *limes*). Recent archaeological research has revealed the spread of the watering system of foggaras from Phazania to other North African regions, such as Ghadames, Zillah, Derj, Waddan, Sokna, Byzacena, oases of Nafzāwa –where foggaras remain active–, Twat, Gurara, Tidikelt and Aures, where local legends associate foggara technology with Saharan Amazigh groups in contrast to the hydraulic techniques of Roman origin. See Wilson, Mattingly & Sterry (86-93) as well as the map by Fentress & Wilson (56–57) that shows the spread of the foggara watering system across North Africa, from where it was probably introduced in Al-Andalus.

⁶⁴ The traditional endonym of Kabyles was *izwawn* (known in French as *Zouaoua* and in Catalan as *zuaus*), plural of *azwaw*.

⁶⁵ They were known as *Κουδαμούσιοι* in Greek sources and *Vcutamani* in Latin sources. See Laporte and Múrcia (2011a, vol. 2, § VII.27, 6).

⁶⁶ Nisibis-born (in modern Kurdistan) geographer Ibn Hawqal says that the village (*qarya*) of Aġġar, in the Msila region (Mauretania Cesariensis) is well provided with water wells and mentions the tribe of the *Banū Aġġar Fazzān*, whose core region would be Fazzān. See the reference and comments on this passage by Meouak (2015, 56). It is alluring to identify these Banū Aġġar with the Kel Ajjār, an important Tuareg confederation that inhabits the Ajjār region between Ghadames and Ghat. The Kel Ajjār are speakers of the Tamahaq variety of Tuareg, just like that spoken in Ahāġgar (see Gast 1986). If the identification is correct, we should assume that the phonetic evolution *azgār* ‘ox’ > *ajjār*, which is specifically Tamahaq, was already in place in the time of Ibn Hawqal (10th century). The list of Amazigh tribes as reported by Ibn Hawqal includes a group called *Izqāran*, which can be transcribed as *Izgarān*, which Lewicki identified as the same group as the modern Kel Ajjār (Lewicki 1959, 130). In that case, the Banū Aġġar may have been highly akin to the Hawwāra given their origins in Central Sahara. And, as in the case of the Hawwāra, mediaeval sources talk about the expertise of the Banū Aġġar concerning the use of water arising from the phreatic layer. M. Barceló (1995, 30) linked the toponym *Benàger* with *Beniatzar*, the name of an *alqueria* of Bunyola (Mallorca) and also of Agullent (Vall d’Albaida). This connection is phonetically dubious. However, a link with another toponym of Vall d’Albaida, the municipality of *Beniatjar*, with the name of the *alqueria* of *Vinanaja*, attested in 1248 and cited by C. Barceló (1982, 111–112) is plausible, although the Arabic etymon proposed by the author is rather unlikely. Furthermore, Puigvert suggested that *Āger* (*Ajīra* in Arabic sources), the principal centre of the homonymous valley between the mountains of Montsec d’Ares and of Monclús and the Noguera Pallaresa and Noguera Ribagorçana rivers, may come from this Amazigh ethnonym. The zone of Āger was located in the Northern March and was conquered by the Christians in 1034 (Puigvert, 76). Coromines proposed instead a Latin etymology for the toponym (*OnCat* 2, 15, col. b, l. 34).

⁶⁷ The important role that Valencian toponymy played seems to accord to the Hawwāra in the construction of the *séquieres* of the *Horta de València* strengthens the conclusion reached by geohistorian G. Lazarev

(Rascanya, which was known as *Isba*) is not a demonym. Likewise, the names of some of the oldest *alqueries* refer to Amazigh groups, such as the Malilla < Malīla⁶⁸, which was a tribe belonging to the Hawwāra confederation. These Amazigh agnatic groups joined together to build the *Horta de València* in its early stages (8th and 9th centuries) by applying their extensive knowledge in the use of water resources of the phreatic layer to divert water from rivers and phreatic layers. Hence, we can assume that Ihāgg^warān (Favara), Kel Ajjār (Benàger) and Imššddaln (Mestalla), among others, benefited from their expertise in hydraulic engineering acquired mostly in the construction of aquifer underground galleries, and were thus able to adapt to a more favourable environment, such as the fluvial valleys of the Xúquer, Túria, Palància and Segura rivers.

Watering systems based on underground galleries of the foggara type, which are far more complex, were implemented in Šarq Al-Andalus to a lesser extent and only where they were needed, mostly in the arid areas south of Xúquer, such as the valley of Vinalopó and areas lacking river water. It is therefore unsurprising that nomadic agnatic groups known by the hegemony they achieved thanks to dromedaries⁶⁹ and the preeminence of a cattle husbandry-based economy, as was the case for both the Hawwāra and the Banī Aġġar, were the principal agents in the construction of the most extensive and important market garden of the Western Mediterranean across the ages and until very recent times.

In North Africa there has always been a clear geographic predominance of nomadic pastoralism over sedentary agriculturalism. Nomadic hegemonies can only be superseded by other nomadic hegemonies thanks to segmentarity and to bonds of tribal affiliation, but, although European historiography has long disregarded the diversification of economic activities within these Amazigh groups –often by means of specialisation of some fractions of a tribe in pastoralism, and others in agriculture and even in trade and manufacturing–, recent research has found evidence of this diversified economy lasting well into the 20th century⁷⁰.

about the Šanhāġa/Aznag kinship of this powerful confederation, which genealogists class as Barānis (see below, § 6).

⁶⁸ The ethnonym *Malīla* belongs to the same root √MLL ‘to be white’ as the toponym *Benimallunt* (Marina Alta), but the etymon is different.

⁶⁹ At the beginning of the Roman colonization of Africa, dromedaries abounded and were important for the economy in the eastern provinces, mainly in Tripolitania and southern Byzacena. Dromedaries came from Yemen around the 4th and 2nd century BC and spread from eastern Sudan towards the Sahara across the Sahelian routes, passing through Tibesti and the Chad basin. Dromedary culture became distinctly African and the saddle was also placed in front of the hump by Tuaregs as well as by Šanhāġa/Iznagn, and later by the Arabs of the Western Sahara. The introduction of dromedaries was far more limited in Mediterranean areas, where the horse is the most suitable animal for riders. See Lazarev (2021, 348–351). Hence, caravans of dromedaries (or mixed dromedaries and donkeys) were in use in Central Sahara not much earlier than the 4th century BC, according to Liverani (2020, 61).

⁷⁰ The Saharan oasis were cultivated in four or five superposed layers: from top to bottom, date palms, olives and figs (introduced in Fazzān around 1000 BC), then figs (present during Garamantian times), cereals (barley, emmer, millet and sorghum since the end of the second millenium BC, although African varieties of millet and sorghum were replaced by Oriental ones in Roman and Islamic times) and legumes on the ground. See Liverani (2020, 57-59). Garamantes traded dates and grain (mainly barley and wheat) northwards, at least to the southern frontiers of Tripolitania, according the early 3rd century CE *ostraca* from Golas/Bu Njem. See Múrcia (2011b and 2022d), Mattingly (2016, 20), Wilson (2017, 201). Besides, there was a great demand for Garamantian Fazzān cotton, which was sold in the North African and West Mediterranean markets; according to Wilson (2017, 202), “its cultivation was doubtless enabled by foggara irrigation”. Therefore, “we can be confident that the Berbers who harried and gradually occupied late Roman North Africa were not simply camel-riding desert nomads, but desert agriculturalists who had mastered complex irrigation technologies such as foggaras and lived by a combination of oasis agriculture and both short- and long-distance trade. Their trading networks go a long way toward explaining the remarkable geographical range over which the Berber tribal confederations associated and operated and

The physical structure of the *Horta de València* and presumably that of the other market gardens of Šarq Al-Andalus –which will only be revealed once comparably comprehensive research of hydraulic archaeology has been conducted in other irrigated lands– is a clear result of the Amazigh segmentary social structure. Esquilache compellingly showed that the arborescent structure of the watering systems is the result of a chain of splits in the canals that are joined through proportional *partidors* –also known as *sistars*, which are devices that distribute water– which reflect the correlation with a social structure based on the independent and agnatic groups of a tribal society (see Figure 3 below). Every secondary canal that rises in a proportional *partidor* brings water down to the *alqueries*, which are located at the end of each branch and are the dwelling and working places of Amazigh agnatic groups.

As for the management and division of the water (coming both from springs or canals) by the community, the system of fixed shares and time turns, granting to each group an equitable availability, is well attested in antiquity times both in Eastern Sahara (Kharga) and in the borders of the Northern Sahara (Lamasba)⁷¹.

During the second half of the 9th century and the first half of the 10th century the tribal groups ceased to constitute *alqueries* composed of several working and dwelling spaces and started to constitute *alqueries* with only one concentrated irrigation space. These small irrigation spaces –which tended to occupy around fourteen hectares on average, since most groups consisted of a relatively similar number of individuals– were worked by farming groups organized into rural communities with high levels of political and social autonomy but at the same time connected through the market. Once a farming group began growing, it started segmenting and splitting. An offshoot would segregate from the main stem as a consequence of population overflow and move to another place where it created its own hydraulic space. Those who moved were young conjugal families who left the ancestral home together with their children and built their own household elsewhere. These were usually short-range migrations, although some segments emigrated to the Eastern Islands of Al-Andalus after the 10th century.

Incidentally, there are no morphological indications of any kind of state intervention in the construction of the *Horta*. Indeed, it is clear that there was no original design of the

why the Byzantine forces had to defend themselves along the whole length of the southern frontier, from the Aurès to the Gulf of Sirte” (Fentress & Wilson, 62). Moreover, nomads are also attached to towns and oases, where they own lands and palm trees and often levy taxes from sedentary populations. Shepherds on the eastern side of the Atlas mountains have their barns in pre-Saharan oases. Amazigh populations who settled in the Iberian Peninsula, in the Balearic Islands and in Sicily came from nomadic livestock farming tribes, whose secondary source of income was agriculture. However, in rural areas of Al-Andalus they eventually sedentarized so that extense livestock farming became a complementary specialization of agriculture, as it was their economy prior to the depletion of water extracted from the phreatic layer and the recrudescence of dryness in Central Sahara.

⁷¹ See Liverani (2020, 60). It is already described in a splendid passage by Pliny the Elder: “Ciuitas Africae in mediis harenis petentibus Syrtis Leptimque Magnam uocatur Tacape, felici super omne miraculum riguo solo. Ternis fere milibus pasuum in omnem partem fons abundat, largus quidem, sed et certis horarum spatiis dispensatur inter incolas. Palmae ibi praegrandi subditur olea, huic ficus, fico punica, illis uitis, sub uite seritur frumentum, mox legumen, deinde olus, omnia eodem anno, omniaque aliena umbra aluntur” ‘There is a city-state called Tacape, in the middle of the desert on the route to the Syrtes and Great Leptis, which has the exceptionally marvellous blessing of a well-watered soil. There is a spring that distributes water over a space of about three miles in every direction, giving a generous supply, but nevertheless it is distributed among the population only at a special fixed periods of the day. Here underneath palms of exceptional size there are olives, under the olives figs, under the figs pomegranates, and under those vines; and underneath the vines is sown corn, and later leguminous plants, and then garden vegetables, all in the same year, and all nourished in the shade of something else’ (Pliny *Naturalis historia*, XVIII, 188, ed. Le Bonniec 1972, 120, English translation by Rackham 1961, 307).

whole system led from the top. The initial design did not reflect either urban or commercial interests. Towns were usually established in the middle of a market garden after the construction of *alqueries*, which were associated with agnatic groups⁷². It is unconceivable that the towns of Šarq Al-Andalus originated without the prior existence of developed farming spaces that could have provided the population with nourishment and agricultural products. The main market gardens, besides that of València, were those of Oriola (which grew from the Roman and Visigothic centre), Elx (which was rebuilt after 950 CE), Xàtiva, Sogorb, Tortosa and Murcia (which was founded in 825 CE as a state effort to control and subjugate the tribes of the Tudmīr region).

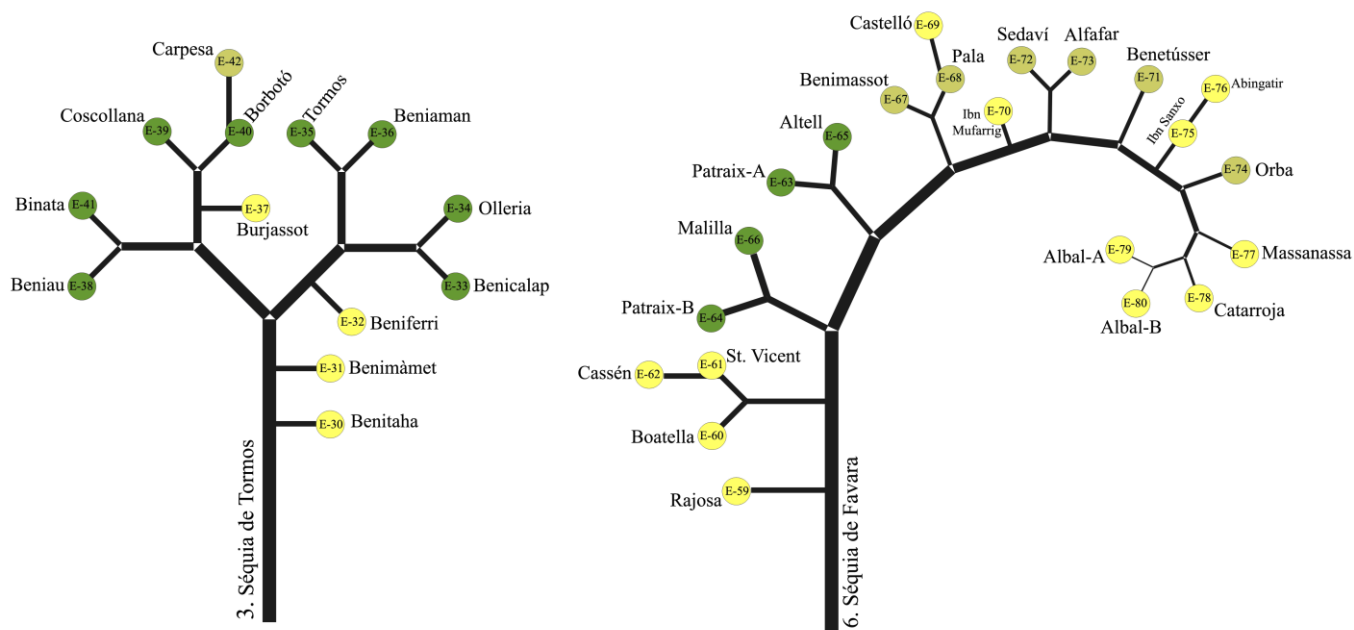


Figure 3. Scheme of the arborescent structure of the irrigation systems of Tormos (left) and Favara (right). Source: Esquilache (2018, Figure 34, in annex).

6. Sociolinguistic situation in Šarq Al-Andalus

On the basis of the historiographical, archaeological, sociological, anthropological, ethnonymic and toponymic data presented in the previous chapters, we may assume that during the period 714-929 CE, which has been considered by some scholars as the “Paleo-Andalusi period,”⁷³ social bilingualism in Amazigh and Andalusi Romance was not the

⁷² As Abel Soler (personal communication) has opportunely remarked, the medinas of Šarq Al-Andalus grew organically following an arborescent structure that is the consequence of the segmentary tribal structure of their inhabitants. We can thus find in Šarq Al-Andalus tribalized and clan-based *alfares* (streets or neighbourhoods) and *atzucacs* (dead ends). As an example, in the Vall de Pop (Marina Alta) there is the village of Benigembla, whose name may come from the Almoravid clan of the Banī Ġamla, which, after destroying Agadir (ancient Pomaria) in the year 1080 as part of the army lead by Yūsuf ibn Tašfīn, settled in Tlemcen, where *Beni Djembla* designates a quarter of this town in the ancient Mauretania Caesariensis.

⁷³ See Jiménez Gadea (211). Use of this “concept” implies that Andalusi society did not develop until the 10th century and that, therefore, the preceding centuries were only a stage of “provisional” formation that, strictly speaking, were not part of the Andalusi period. Scholars who make use of this concept downplay the role of Amazigh immigration in the construction of society in the Iberian Peninsula during the 8th and 9th centuries.

trend in Šarq Al-Andalus, but rather an assimilation of Romance populations into the more articulated Amazigh agnatic social system, which probably resulted in a progressive linguistic substitution of Andalusí Romance. The Caliphate (929) and Taifas (1031) periods were a time of intense Arabization in Šarq Al-Andalus. Both Romance (Christians and muladis) and Amazigh speakers adopted Arabic⁷⁴. The process of adoption of the Arabic language is not known in detail, which is striking if we take into consideration the small volume of lineages of Arabic descent attested in Šarq Al-Andalus before the 11th century. In part, we can assume that many Amazigh fractions and clans established clientship ties with Arabic lineages in a similar way as in Northern Africa during the same periods and afterwards. Being of Arab (real or fictitious) descent conferred a pedigree that in some circumstances was required to legitimize the exercise of power and that in any event was very advantageous for improving social status.

Christian communities only survived in the most important towns and remained confined outside the city walls, discriminated against and subjected to the payment of the *dirhm* (a monthly tax that guaranteed their “protection”) and the *ḥarāğ* (a tax on land ownership), which may have been designed to encourage apostasy. Beyond the 11th century there are no traces of the use of Andalusí Romance, following a severe acceleration of attrition in the time of the Taifas⁷⁵, and there were very few autochthonous Christian communities⁷⁶; Christians living in Šarq Al-Andalus during the 12th and 13th centuries were mainly Catalan, Genovese and Pisan merchants and some *šaḡāliba* (enslaved Slavs)⁷⁷. By the time of the arrival in Al-Andalus of the Amazigh dynasties of

⁷⁴ “Ce mode d’identification [*muwallad*] semble pourtant avoir périclité dès le IV^e/X^e siècle au profit de l’expression d’une appartenance à un Islam «arabe» regroupant tous les musulmans non étiquetés comme «berbères»” (Aillet, 315). See the sociolinguistic remarks on this period of the history of Šarq Al-Andalus by Ferrando (99-103).

⁷⁵ See Corriente (1998b, 337-338).

⁷⁶ “Vers le milieu du IX^e siècle [...] le Levant semble massivement musulman” (Aillet, 311; 52-59). Before the philological edition and the thorough linguistic and literary study that the most eminent specialist in Andalusí Arabic, F. Corriente (1998b and 2009), devoted to *kharjas*, it was widely assumed that *kharjas* reflected the use of Andalusí Romance at the time and in the regions in which they were written down. According to Corriente, *kharjas*, which are refrains of strophic poems, are not related to any Romance lyrical tradition but are the work of Andalusí Arab and Jewish poets, which apply a purely Arabic meter (that of *‘arūd*) and strophism (that of *tasmīl*) to their compositions. Almost all *kharjas* are composed in Andalusí Arabic and only a few dozen include a passage (some lines or words) in Romance. As Corriente has compellingly shown, the fact that the preserved manuscripts of *kharjas* date from the 11th and 12th centuries is not proof of the use of an Andalusí Romance language until that time, for *kharjas* were composed between the 10th and the 11th centuries and might have been codified later (Corriente 1998b, 343) and thus taken by poets of *muwaššahāt* of different regions and times. Poets of the 11th and 12th centuries resorted to *kharjas* that had previously been written down in collections of *muwaššahāt* (Colón, 389). The literary use of dialectal and foreign speech in some lines is a poetic resource that had already been resorted to by the famous eastern poet Abū Nuwās (8th century) “for the sake of stylistic variation and the introduction of facetiousness” (Corriente 2009, 116-117). As a result, the language of the different *kharjas* is not evidence of the location of the composition of the *muwaššaha* to which they belong. For instance, the *kharjas* written in Šarq Al-Andalus, such as those of Ibn Hārūn al-Ašbāhī al-Lāridī (mid 12th century) and Ibn Ruḡaym of Bukayrān (first half of the 12th century), are of no use for the description of the indigenous Romance language spoken in Lārida (Lleida) or in Bukayrān (Bocairent), respectively, and likewise provide no indication of the spontaneous use of an Andalusí Romance language contemporarily to the authors. See Colón (388-389) and the discussion in Aillet (13-15).

⁷⁷ See Ferrando (100). According to Torró (150), “Si a Tortosa no hi ha cap indici de la presència de mossàrabs en el moment de la conquesta (1148), la fi definitiva de la comunitat cristiana de València és, indubtablement, anterior a mitjan segle XII” ‘If in Tortosa there is no hint of the presence of Mozarabs at the time of the conquest (1148), the definitive end of the Christian community of València is certainly prior to the middle of the 12th century.’ On the trade ties between Catalans and North African Amazighs during this century, see the monograph by Dufourcq.

the Almoravids (between 1040 and 1147, but in València only after 1094), which belonged to the Ṣanhāġa stem, and of the Almohads (between 1147 and 1269, but in València only after 1172), of the Masmūda stem, it seems that the Amazigh communities that had arrived during the Early Middle Ages were already linguistically Arabized⁷⁸ and even no longer identified with the new “Barbar” settlers, who were still unaffected by the Arabizing acculturation carried out in Al-Andalus⁷⁹.

The Amazigh groups that arrived in Šarq Al-Andalus during the High Middle Ages (mainly groups related to the Almoravids and Almohads) maintained their own language until the 13th century. The statement by Ibn ‘Amīra al-Maḥzūmi (13th century), a historian from al-Ġazīra Šuqr (Alzira), supplies clear evidence of this. In his chronicle of the Catalan-Aragonese conquest of Mallorca in the year 1229, the author claimed that, during the battle, the Almohad governor of the city called to his fellow tribesmen in “Berber” so that they could retreat to a hilltop while leaving the Andalusi people, who could not understand their language, at the mercy of Christian spears⁸⁰. The reasons for this clash between Amazigh groups of different origins are hard to explain.

On the basis of descriptions of 10th century genealogists and their own perception of contemporary Amazigh tribes, Ibn Ḥaldūn set a clear distinction between two stems of Amazigh tribes, the Butr, characterised as wearers of short clothes⁸¹, and the Barānis, characterised as wearers of the burnous (a kind of long cloak of coarse woollen fabric with a pointed hood)⁸², called *abrnus* (~ plural *ibrnas*) in Amazigh. It is not clear whether the “standard” classification of Ibn Ḥaldūn reflects an actual historical distinction. In his doctoral dissertation, Y. Modéran (2003) concluded that, in the early years of the conquest, the Butr were the “Moors from outside,” i.e., these Amazigh populations remained *extra limitem*, out of Romanity, whereas the Barānis were the “Moors from inside,” i.e., these Amazigh populations were *intra limitem*, exposed to Romanity and

⁷⁸ Bosch Vilà (1978, 138) assumed that Amazigh language and culture survived longer in relatively isolated areas, citing the Meseta, the marches and the mountain ranges as the main stronghold of Amazighity in Al-Andalus.

⁷⁹ Ghouirgate (595-604) has shown that Ibn Tūmart and his successors tried to make their Amazigh variety (a mediaeval stage of Tachelhit) the official language of the Almohad Caliphate and that during the first half of the 12th century a governmental bilingualism of Arabic-Amazigh was practiced. The *Kitāb al-asmā’* was written around 1145 by Ibn Tūnart (not to be confused with Ibn Tūmart, the founder of the Almohad Caliphate). Ibn Tūnart was a jurist and scholar from the Hodna mountains and his *Kitāb al-asmā’*, which is the most important lexicographical source of mediaeval Amazigh, is an Arabic-Tachelhit Amazigh dictionary containing some 2500 entries. This dictionary was used mostly by jurists to write inheritance and legal documents, but it was also used for other purposes. Five manuscripts from the 17th-20th centuries are preserved in the libraries of Leiden (three) and of Fonds Roux (two). Although preliminary surveys of these manuscripts were conducted more than 20 years ago by van den Boogert (1997, 113-119; 1998, 11-13), no edition of the dictionary is available. The whole manuscript of Ibn Tūnart is being edited by Abdallah Amennou. Nait-Zerrad, Lounissi & Djemai have published an on-line edition of this dictionary according to the manuscripts of the Fonds Roux, but it is a work-in-progress. The linguistic exploitation of this dictionary will be a valuable key for knowledge of mediaeval Amazigh as soon as it is published. The trend of Amazighization of the new Amazigh dynasties of Al-Andalus could not counteract the strong Arabizing inertia of the preceding centuries.

⁸⁰ Edition and translation by Ben Ma‘mmar, Nebot & Rosselló (69). See the comment on this passage by Ghouirgate (590). This statement may reflect the trend for linguistic Arabization of Amazigh populations that had come to Mallorca in the previous centuries (from 902 CE onwards), but might also imply an important dialectal differentiation between the “western language” of Masmūda –*al-lisān al-ġarbī* in Arabic texts, which was how Masmūda named their own Amazigh variety, whose most evident continuator is Tachelhit– and the eastern Amazigh varieties of the forerunners who had settled in the Eastern Islands of Al-Andalus during the 10th and 11th centuries.

⁸¹ See Golvin (1991b).

⁸² See Golvin (1991a).

Latinity and were more or less Christianized. According to Arab genealogists, eastern Berbers (from western Egypt, Cyrenaica and Tripolitania) belonged mostly to the Butr stem, which comprised such populous groups as the Lawāta, Mazāta, Nafūsa⁸³, Zawāga, Miknāsa, Nafza/Nafzāwa and Zanāta, among others. Some genealogists include among the Zanāta the different groups of the Banī Fātan, which comprised the Matgāra, Saddīna, Madyūna, Maḡīla, Maṭmāṭa and others. In contrast, the groups in the Barānis stem comprised the Ṣanhāga, Masmūda, Awrāba, Kutāma and Awrīga, among others.

The classification of the Hawwāra is the most controversial. This group is generally classified by mediaeval genealogists as Barānis, or to be exact, as Ṣanhāga, a subgrouping that can be justified historically because the Hawwāra had been infiltrating Tripolitania since the 6th century, from Central Sahara, specifically from Ahāggar, where they may have settled around the 4th and 5th centuries. Their southern neighbours were the Lamta, who were also Ṣanhāga and “wearers of the veil.” In Ahāggar, the Hawwāra would have been Tuaregized⁸⁴. As soon as the Austuriani, Laguatan (Lawāta) and Mazāta left Tripolitania during the 6th and 7th centuries, the Hawwāra took over this region. After the Lawāta and Mazāta, the Hawwāra were the first great Amazigh confederation that Arabs encountered during their early raids, around 642-647 CE. The Hawwāra were purportedly among the first Amazigh groups to be Islamized and to support Ibadism before spreading all over the Mediterranean, from Egypt to Sus, Al-Andalus and Sicily, although some tribes remained in Tripolitania until the time of the Hilalian invasion. If the Hawwāra were, according to Arab sources, among the first groups to be Arabized linguistically and to adopt the Arab way of life, they may have been more easily assimilated into eastern groups, which were predominantly from the Butr stem⁸⁵.

The dialectal implications of this genealogical scheme (as described here, taking into account the concerns of toponymic inquiries in the context of Šarq Al-Andalus) are not at all clear. There is no doubt that sometime in the late Early Middle Ages Zenatization of populations in the centre and the west of North Africa took place. It is not known which groups were responsible for such Zenatization or which historical context enabled it.

On the basis of archaeological grounds, E. Fentress and A. Wilson recently held that large Saharan nomadic tribes advanced northwards into the steppes and would have Zenatized the Amazigh varieties spoken in these areas. The reason for these migrations might have been the degradation of water resources in Phazania (Fazzān) due to the depletion of water extracted from the phreatic layer by means of foggaras and the recrudescence of dryness in Central Sahara⁸⁶. Zenatization would have thus affected most regions east of ancient Mauretania Tingitana, and, even in this area, the Rif, some tribes

⁸³ Nafūsa designates the tribe that lives in the mountain range south of the Tripolitanian coast as *Drar n Infusən* ‘Nafūsa mountains.’

⁸⁴ According to Lazarev (2021, 288-289). See also Lazarev (2020).

⁸⁵ Lazarev (2021, 61, n. 81) comments on these sources about the Hawwāra. This is a rather controversial statement, since it is generally assumed, see Marçais, Camps and Kossmann (2013) that, before the year 1050, with the invasion of some clans of the Banū Hilāl and the Banū Ma’aqil, which came from the southern Arabian Peninsula, Arabization of North Africa was limited to newly founded towns with little influence from Amazigh tribal groups, such as Qayrawān (in Ifriqiya) and Fez. As a matter of fact, phonetic adaptation of early Arabisms related to the basic concepts of Islam shows that the new religion was preached in Amazigh in North Africa at least until the 11th century.

⁸⁶ Fentress & Wilson (59-63). Fentress (512-516) identifies the Saharan immigrants that built the tumuli “à caisson” that are found from southern Byzacena into the valley of the Dra since the 5th century CE as “Proto-Central Amazigh” or Zenatic speakers: “I would propose to associate the groups that created these tumuli with the same speakers that settled Fazzan” (*op. cit.*, 505). See also the relevant remarks made by Lazarev (2021, 113, 387-388 and 403-404).

of Middle Atlas and the Figuig oasis eventually became Zenatized, with the conspicuous exception of the Kabylia.

Linguistically, though, it is difficult to agree with a Central Saharan origin (domain of Tuaregs and some Ṣanhāḡa groups) for the Zanāta dialectal stock. Instead, on the grounds of diachronic linguistic evidence, M. Kossmann holds that Zanāta dialectal spread was westwards and contemporary to the Arab-Islamic conquest of North Africa⁸⁷.

According to geohistorian G. Lazarev, the language of Paleo-Amazigh continuators of ancient *Bauares* and *Baquates*, which Latin sources located in the steppes of the Oran region and of the Moulouya river, would have been Zenatized and some of their ancient inhabitants retreated westwards towards the 7th century. The author holds that Islamized Amazigh tribes arrived from the east and imported to the territories of ancient Zeugitana, Byzacena, Numidia and Mauretania Caesariensis their Zanāta variety, which still constitutes the prevailing linguistic stratum of this vast and discontinuous space⁸⁸.

It is rather tricky to determine a correlation between data obtained from archaeology, Arabic sources and geohistory on the one hand, and linguistic data on the other hand. It is worth noting though the essential facts of the state of play regarding this issue, as Amazigh groups have a diverse North African background whose distribution in Šarq Al-Andalus may have been related to their tribes of origin. The dialectal subgrouping of these tribes is also relevant for the analysis of linguistic relics that have survived in toponymy. The importance of the settlement of Amazigh groups from the eastern stem in Šarq Al-Andalus during the 8th and 9th centuries might explain the estrangement from and even the rejection by the forerunners towards the newcomers, whom were from the western and northern stems, as they were Ṣanhāḡa that came in Almoravid times from the Dra valley and Western Sahara and Masmūda that came in Almohad times from the High Atlas, Middle Atlas and other regions of ancient Mauretania Tingitana.

7. Conclusions

This preliminary study correlates linguistic, philological, geohistorical, archaeological, anthropological and economic factors that should be taken into account in research on the Amazigh toponymy of Šarq Al-Andalus. The significant advances in the fields of Amazigh historical linguistics, in the hydraulic archaeology of Šarq Al-Andalus and in the philological sources concerning population movements and the social segmentary structure of Amazigh groups in the transition between late antiquity and the Early Middle Ages give hope regarding the identification of the Amazigh element in Al-Andalus in the 8th and 9th centuries and beyond, a period so poorly known until recent times that it has even been considered as “pre-Andalusi.”

A typology of toponymic categories (tribal, clan-based and geographical toponymy, which includes microtoponymy) is defined in order to deal with toponymic inquiries according to the North African background of agnatic groups that were responsible for the Amazigh settlement of Šarq Al-Andalus. In other studies (see bibliography) we have illustrated every toponymic category with case studies that show that microtoponyms, i.e., place names based on common lexicon that designate ravines, gullies, cliffs, hills, paths, meadows, forests, villages, hamlets, castles, creeks, sources, springs, ditches, canals, etc., are of the highest linguistic interest for the history of the Amazigh language in a period when it is quite poorly attested.

Dialectal features within the Amazigh cluster as shown by toponyms are very relevant because they inform about the provenance of Amazigh communities settled in the

⁸⁷ Kossmann (2020a, 283-284).

⁸⁸ Lazarev (2021, 70).

different regions of Šarq Al-Andalus, since, as already revealed by tribal toponymy and by a few philological sources, eastern groups (originally from Tripolitania, Cyrenaica, southern Byzacena and Central Sahara) widely prevailed during the 8th and 9th centuries, and western (those akin to the Šanhāga of Dra valley and Western Sahara, as were the Almoravids) and northern groups (those akin to Masmūda, a rather heterogenous designation for the High Atlas, Sus valley, Anti-Atlas and Middle Atlas groups, as they were the Almohads) prevailed in the 12th and 13th centuries. Still, this overall picture does not reflect the complexity or heterogeneity of population movements in each comarca. The distribution of agnatic groups from different stems in the territories of Šarq Al-Andalus is still a major issue that requires further research.

Both the development of Amazigh diachronic linguistics and the new archaeological finds in Central Sahara reveal that the caricatured depiction of mediaeval Berber groups as described not only in Arabic and colonial sources but even in current surveys must be turned around. These groups were not only camel-riding desert nomads but they were also accomplished experts in techniques of water extraction and in irrigated agriculture. They adopted an organisation of large-scale labour to construct and maintain the foggaras long before settling in Al-Andalus. Amazigh societies from Central Sahara lived in a dense network of permanently occupied villages and hamlets consisting in distinctive fortified structures (*iyрман*) that included rectilinear, complex and multi-roomed houses around water resources. They had developed a complementary economy based on extensive farming, on cattle breeding and on Trans-Saharan trade of cotton, grain and other products into the Mediterranean world either into the Sahel. Each fraction of a tribal group specialized in an economic sector while keeping the ties of kinship with the upper segment. Their far-reaching hegemony relied initially on horse-riding and chariot-driving and slightly later on dromedary-riding and established tributary relationships with the agriculturalist populations of the oases, with whom they exchanged the meat and milk of their cattle for dates and other oasis crops. Other well attested crafts included spinning, weaving and a scriptural use of Libyan and Tifinagh abjad. Their kinship was certainly agnatic and probably patrilineal complemented by matrilineal ties with the mother's kin.

Works cited

- Aillet, Cyrille. *Les mozarabes. Christianisme, islamisation et arabisation en Péninsule Ibérique (IX^e-XII^e siècle)*. Madrid: Casa de Velázquez, 2010. 418 pp.
- Barceló, Carmen. *Toponímia aràbica del País Valencià. Alqueries i castells*. València: Canals, 1983. 307 pp.
- . *Minorías islámicas en el País Valenciano. Historia y dialecto*. València: Universitat de València, 1984. 399 pp.
- . "Sobre alguns topònims àrabs del País Valencià: els noms de lloc de tipus 'beni'." In *Xè col·loqui general de la Societat d'Onomàstica (València, 29-30 de març de 1985)*. València: Universitat de València, 1986. 411-415.
- . "¿Galgos o podencos? Sobre la supuesta berberización del País Valenciano en los siglos VIII y IX." *Al-Qanṭara* 11 (1990): 429-460.
- Barceló, Miquel. "Sobre tres topònims berebers a les illes Orientals d'Al-Àndalus." In *Faventia* 2/2 (1980): 131-136.
- . "Sobre l'hidraulisme andalusí." In Miquel Barceló, Maria Antònia Carbonero, Ramon Martí & Guillem Rosselló-Bordoy eds. *Les aigües cercades. Els qanat(s) de l'illa de Mallorca*. Palma de Mallorca: Institut d'Estudis Baleàrics, 1986. 9-46.
- . "Els Ayt Iraten i els altres: immigració i assentaments berbers al Sharq al-Andalus." In Riccardo Francovich & Enrica Boldrini eds. *Acculturazione e mutamenti. Prospettive nell'archeologia medievale del Mediterraneo*. Siena: All'Insegna del Giglio, 1995. 29-52.
- . "Loquella barbarica (I)." *Faventia* 19/2 (1997): 141-147.
- . "Loquella barbarica (II)." *Faventia* 22/1 (2000): 87-110.
- . "Immigration berbère et établissements paysans dans l'île d'Eivissa (902-1235): à la recherche de la logique de la construction d'une nouvelle société." In Jean-Marie Martin ed. *Castrum VII. Zones côtières et plaines littorales dans le monde méditerranéen au Moyen Âge: défense, peuplement, mise en valeur*. Rome: École Française de Rome, 2001. 291-321.
- Barceló, Miquel & Laura Veà. "Un bou que era una planta (Bou negre / bu nerzo / nerjo): contribució al lèxic tamazight dels Gelida (Argelita, Castelló)." *Faventia* 18/2 (1996): 93-98.
- Bazzana, André. *Maisons d'al-Andalus. Habitat médiéval et structures du peuplement dans l'Espagne Orientale*. Madrid: Casa de Velázquez, 1992. 823 pp.
- . "Vestiges de structures défensives d'époque romaine tardive et d'époque musulmane au peñón d'Ifach (Calpe, province de Alicante)." *Revue des mondes musulmans et de la Méditerranée* 126 (2009): 27-46.
- Bazzana, André & Pierre Guichard. "Estructures de poblament i organització de l'espai." *Ullal* 11 (1987): 40-50.
- Bazzana, André, Salvador Climent & Yves Montmessin. *El yacimiento medieval de «les Jovades»*. Oliva: Ajuntament d'Oliva, 1987. 131 pp.
- Beekes, Robert. *Etymological Dictionary of Greek*. Leiden: Brill, 2010. 2 vols. XLIV+1808 pp.
- Ben Ma'amar, Muḥammad, Nicolau Roser Nebot & Guillem Rosselló Bordoy est., trad. esp. *Al-Maḥzūmi. Kitāb tā'rīḥ Mayūrqa. Crónica àrabe de la conquesta de Mallorca*. Palma de Mallorca: Universitat de les Illes Balears/Presidència de les Illes Balears, 2009. 192 pp.

- Boogert, Nico van den. *The Berber Literary Tradition of the Sous with an edition and translation of "The Ocean of Tears" by Muhammad Awzal, d. 1749*. Leiden: Nederlands Instituut voor het Nabije Oosten, 1997. 455 pp.
- . *La révélation des énigmes. Lexiques arabo-berbères des XVII^e et XVIII^e siècles*. Aix-en-Provence: Institut de Recherches et d'Études sur le Monde Arabe et Musulman (IREMAM), 1998. 241 pp. Col. Travaux et documents.
- Bosch Vilá, Jacinto. *Albarracín musulmán. Parte primera. El Reino de Taifas de los Beni Razín, hasta la constitución del señorío cristiano*. Teruel: Instituto de Estudios Turolenses, 1959. 217 pp.
- . "A propósito de la berberización de al-Andalus." *Les Cahiers de la Tunisie* 26 (1978): 129-141.
- Boudouhou, N. & René Rebuffat. "Moulouya." *Encyclopédie Berbère*. Aix-en-Provence/Paris: IREMAM/INALCO/AIBL/Peeters, 2010. Vol. 32: 5091-5095. On line: [Link](#) [Checked: 20/12/2021].
- Camps, Gabriel. "Comment la Berbérie est devenue le Maghreb arabe." *Revue de l'Occident Musulman et de la Méditerranée* 35 (1983): 7-24.
- Camps, G. & et alii. *Encyclopédie Berbère*. Aix-en-Provence/Paris: IREMAM/INALCO/AIBL/Peeters. 1970-2022. On line: [Link](#) [Checked: 20/12/2021].
- Claudot-Hawad, Hélène. "Matriarcats." *Encyclopédie Berbère*. Aix-en-Provence/Paris: IREMAM/INALCO/AIBL/Peeters, 2010. Vol. 31: 4697-4705. On line: [Link](#) [Checked: 20/12/2021].
- . "Parenté." *Encyclopédie Berbère*. Aix-en-Provence/Paris: IREMAM/INALCO/AIBL/Peeters, 2015. Vol. 37: 6125-6133.
- Colón, Germà. "Quins mil anys de parla vernacla?." In *idem. Estudis de filologia catalana i romànica*. Barcelona / València: Publicacions de l'Abadia de Montserrat / Institut Interuniversitari de Filologia, 1997. 387-392.
- Coromines, Joan. "Mots catalans d'origen aràbic." *Butlletí de dialectologia catalana* 24 (1936): 1-81, and 286-288. Included in Joan Coromines. *Entre dos llenguatges*. Barcelona: Curial, 1977, vol. 3. 68-177.
- . *Estudis de toponímia catalana*. Barcelona: Barcino, 1965-1970. 2 vols.
- . *Onomasticon Cataloniae*. Barcelona: Curial, 1989-1997. 8 vols. Cited as *OnCat*.
- Corriente, Federico. "Notas de lexicología hispano-árabe. IV. Nuevos berberismos del hispano-árabe." *Awraq* 4 (1981): 27-30.
- . *Árabe andalusí y lenguas romances*. Madrid: Mapfre, 1992. 272 pp.
- . *A Dictionary of Andalusí Arabic*. Leiden: Brill. 1997. XXII+623 pp.
- . "Le Berbère en Al-Andalus." *Études et Documents Berbères* 15-16 (1998a): 269-275.
- . *Poesía dialectal árabe y romance en Alandalús: céjeles y xarajāt de muwaššahāt*. Madrid: Gredos, 1998b. 386 pp.
- . *Diccionario de arabismos y voces afines en iberorromance*. Madrid: Gredos, 1999. 591 pp. 2003 (2nd. Edition), 612 pp.]
- . "The 'Kharjas:' an updated survey of theories, texts and their interpretation." *Romance Philology* 63/1 (2009): 109-129.
- CTV = *Corpus Toponímia Valencià*, available on the website on line: [Link](#) [Checked: 20/12/2021].
- Desanges, Jehan. "Naffur." *Encyclopédie Berbère*. Aix-en-Provence/Paris: IREMAM/INALCO/AIBL/Peeters, 2012. Vol. 33: 5212-5217. On line: [Link](#) [Checked: 20/12/2021].
- Dubler, César E. "Über Berbersiedlungen auf der Iberischen Halbinsel." *Sache und Ort, Festschrift Jakob Jud - Romanica Helvetica* 20 (1943): 183-196.

- Dufourcq, Charles-Emmanuel. *L'expansió catalana a la Mediterrània occidental, segles XIII i XIV*. Barcelona: Vicens-Vives, 1969. 574 pp.
- Elmedlaoui, Mohamed. "L'arabe marocain. Un lexique sémitique inséré sur un fond grammatical berbère." In Salem Chaker & Andrzej Zaborski eds. *Études berbères et chamito-sémitiques. Mélanges offerts à Karl-G. Prasse*. Paris / Leuven: Peeters, 2000. 155-187.
- Epalza, Mikel de. "Els berbers i l'arabització del País Valencià." In Antoni Ferrando ed. *Miscel·lània Sanchis Guarner*. Montserrat: Publicacions de l'Abadia de Montserrat, 1992. Vol. 1: 467-492.
- Esquilache, Ferran. *Els constructors de l'horta de València. Origen, evolució i estructura social d'una gran horta andalusina entre els segles VIII-XIII*. València: Publicacions de la Universitat de València, 2018. 496 pp.
- . "Zonas de pasto y gestión de marjales en balad Balansiya. Unas hipótesis para el estudio de la ganadería andalusí desde la arqueología del paisaje." *Anales de la Universidad de Alicante. Historia Medieval* 22 (2021): 165-189.
- Felipe, Helena de. "Berbers in the Maghreb and al-Andalus: settlements and toponymy." *The Maghreb Review* 18 (1993): 57-62.
- . *Identidad y onomástica de los beréberes de Al-Andalus*. Madrid: CSIC, 1997. 446 pp.
- . "From the Maghreb to al-Andalus: Berbers in a Medieval Islamic Society." In Joseph Krause & Nabil Boudraa eds. *Mosaic North Africa: A Cultural Re-appraisal of Ethnic and Religious Minorities*. Cambridge: Cambridge Scholars Press, 2007. 150-162.
- . "Medieval linguistic contacts: Berber language through Arab eyes." In Mena Lafkioui & Vermondo Brugnatelli eds. *Berber in contact. Linguistic and sociolinguistic perspectives*. Cologne: Rüdiger Köppe Verlag, 2008. 19-37.
- Fentress, Elizabeth. "The archaeological and genetic correlates of Amazigh linguistics." In Maria Carmela Gatto, David J. Mattingly, Nick Ray & Martin Sterry eds. *Burials, Migration and Identity in the Ancient Sahara and Beyond*. Cambridge: Cambridge University Press, 2019. *Trans-Saharan Archaeology*. Volume 2: 494-524.
- Fentress, Elizabeth & Andrew I. Wilson. "The Saharan Berber Diaspora and the Southern Frontiers of Byzantine North Africa." In Susan T. Stevens & Jonathan P. Conant eds. *North Africa under Byzantium and early Islam*. Washington D.C.: Dumbarton Oaks, 2016. 41-63.
- Ferrad, Mohamed Arezki. "Repaso de la historia de los amazighes en Al-Ándalus desde la conquista hasta los reinos de Taifas." In Hassan Laaguir ed. *Los bereberes en la Península Ibérica. Contribución de los Amazighes a la historia de Al-Ándalus*. Granada: Editorial Universidad de Granada, 2021. 81-104.
- Ferrando, Antoni. "De Xarq al-Andalus a Regne de València: la situació lingüística i sociolingüística de les terres valencianes al segle XIII." In Germà Colón & Lluís Gimeno eds. *La llengua catalana en temps de Jaume I*. Castelló de la Plana: Universitat Jaume I, 2010. 97-144.
- Ferrer, Antoni & Virgilio Martínez Enamorado. "Loquilla barbarica (VIII). La etimología de Porto-salè (Formentera, Islas Baleares). Una nueva propuesta." *Faventia* 40 (2018): 75-87.
- Gast, Marceau. "Ajjer." *Encyclopédie Berbère*. Aix-en-Provence/Paris: IREMAM/INALCO/AIBL/Peeters, 1986. Vol. 3: 388-396. On line: [Link](#) [Checked: 20/12/2021].
- . "Foggara." *Encyclopédie Berbère*. Aix-en-Provence/Paris: IREMAM/INALCO/AIBL/Peeters, 1997. Vol. 19: 2868-2869. On line: [Link](#) [Checked: 20/12/2021].
- . "Huwwâra, Houuara, Houara, Hawwâra." *Encyclopédie Berbère*. Aix-en-Provence/Paris: IREMAM/INALCO/AIBL/Peeters, 2000. Vol. 23: 3513-3521. On line: [Link](#) [Checked: 20/12/2021].

- Ghouirgate, Mehdi. "Le berbère au moyen âge. Une culture linguistique au cours de reconstitution." *Annales Histoire Sciences Sociales* 3 (2015): 577-606.
- Golvin, Lucien. "Almoravides." *Encyclopédie Berbère*. Aix-en-Provence/Paris: IREMAM/INALCO/AIBL/Peeters, 1986. Vol. 4: 539-541. On line: [Link](#) [Checked: 20/12/2021].
- . "Barānis." *Encyclopédie Berbère*. Aix-en-Provence/Paris: IREMAM/INALCO/AIBL/Peeters, 1991a. Vol. 9: 1338-1340. On line: [Link](#) [Checked: 20/12/2021].
- . "Botr." *Encyclopédie Berbère*. Aix-en-Provence/Paris: IREMAM/INALCO/AIBL/Peeters, 1991b. Vol. 10: 1564-1565. On line: [Link](#) [Checked: 20/12/2021].
- Guichard, Pierre. "Le peuplement de la région de la Valence aux deux premiers siècles de la domination musulmane." In *Mélanges de la Casa de Velázquez* 5 (1969): 103-159.
- . *Structures sociales Orientales et Occidentales dans l'Espagne musulmane*. Paris / The Hague: Mouton, 1977. 432 pp. Reprinted in Berlin: Walter De Gruyter, 2017.
- . *Toponimia y geografía musulmana de Valencia*. Zaragoza: Anubar, 1979a. 24 pp. Col. "Temas valencianos," 36
- . "La société rurale valencienne à l'époque musulmane." *Estudis d'Història Agrària* 3 (1979b): 41-52.
- . "Toponymie et histoire de Valence à l'époque musulmane: Un chef berbère valencien du IX^{ème} siècle à la conquête de la Sicilie?." In *Primer Congreso de Historia del País Valenciano (València, 1971)*. València: Universitat de València, 1980a. Vol. 2: 399-409.
- . "A propósito de los Barbar al-Andalus." *Al-Qanṭara* 1 (1980b): 424-427.
- . "Els 'Berbers de València' i la delimitació del País Valencià a l'alta edat mitjana." *Afers: fulls de recerca i pensament* 4/7 (1988-1989): 69-85.
- . "Faut-il en finir avec les berbères de Valence?." *Al-Qanṭara* 11 (2) (1990): 461-474.
- . "Els berbers de València, una vegada més. Resposta a Carme Barceló." *Afers* 15 (1993): 225-232.
- . *Al-Andalus frente a la conquista cristiana*. València: Universitat de València, 2001. 784 pp.
- . "Autour de quelques recherches récentes sur les Berbères en al-Andalus." In Mohammed Hammam & Abdellah Salih eds. *La résistance marocaine à travers l'histoire ou le Maroc des résistances (Actes du Colloque, Rabat, 3-5 décembre 2003)*. Rabat: Publications de l'IRCAM, 2005. 183-197.
- Gutiérrez Lloret, Sonia. "The case of Tudmīr: archaeological evidence for the introduction of irrigation systems in al-Andalus." *Early Medieval Europe* 27 (3) (2019): 394-415.
- Gutova, Evgeniya. *Variétés berbères senhaja: phonologie, morphologie et morphosyntaxe*. Unpublished PhD directed by Catherine Taine-Cheikh. Paris: Université Sorbonne Nouvelle, 2021. 790 pp.
- Hart, David Montgomery. "Segmentary systems and the role of 'five fifths' in tribal Morocco." *Revue de l'Occident Musulman et de la Méditerranée* 3 (1967): 65-96.
- Jiménez Gadea, Javier. "Los asentamientos beréberes en Al-Andalus." In José Ignacio de la Iglesia Duarte ed. *V Semana de Estudios Medievales (Nájera, 1-15 de agosto de 1994)*. Logroño: Instituto de Estudios Riojanos, 1995. 209-216.
- Khelifa, Abderrahmane. "Maghraoua - Maghrâwa (tribu)." *Encyclopédie Berbère*. Aix-en-Provence/Paris: IREMAM/INALCO/AIBL/Peeters, 2010a. Vol. 30: 4486-4487. On line: [Link](#) [Checked: 20/12/2021].
- . "Matghara." *Encyclopédie Berbère*. Aix-en-Provence/Paris: IREMAM/INALCO/AIBL/Peeters, 2010b. Vol. 30: 4682-4683. On line: [Link](#) [Checked: 20/12/2021].

- . “Miknaça - Miknasa.” *Encyclopédie Berbère*. Aix-en-Provence/Paris: IREMAM/INALCO/AIBL/Peeters, 2010c. Vol. 32: 5019-5021. On line: [Link](#) [Checked: 20/12/2021].
- . “Nefza (tribu).” *Encyclopédie Berbère*. Aix-en-Provence/Paris: IREMAM/INALCO/AIBL/Peeters, 2012a. Vol. 33: 5381-5382. On line: [Link](#) [Checked: 20/12/2021].
- . “Nefzaoua (Nafzawa): Moyen-âge.” *Encyclopédie Berbère*. Aix-en-Provence/Paris: IREMAM/INALCO/AIBL/Peeters, 2012b. Vol. 33: 5389-5392. On line: [Link](#) [Checked: 20/12/2021].
- Kirchner, Helena. “Migració i irrigació a les Illes Orientals d’al-Andalus.” *Plecs d’història local* 173 (2019): 8-10.
- . “The archaeology of the pesantry in the Early Medieval Age. Reflections and proposals.” *Imago temporis. Medium Aevum* 14 (2020): 61-102.
- Kossmann, Maarten. *The Arabic Influence on Northern Berber*. Leiden/Boston: Brill, 2013. XII+461 pp.
- . “Berber.” In Rainer Vossen & Gerrit J. Dimmendaal eds. *The Oxford Handbook of African Languages*. Oxford: Oxford University Press, 2020a, 281-289.
- . “Sibilants in Libyco-Berber.” *Journal of the American Oriental Society* 140/4 (2020b): 875-888.
- . “Proto-Berber phonological reconstruction: An update.” *Linguistique et Langues Africaines* 6 (2020c): 11-42.
- Laporte, Jean-Pierre. “Ketama, Kutama.” *Encyclopédie Berbère*. Aix-en-Provence/Paris: IREMAM/INALCO/AIBL/Peeters, 2005. Vol. 27: 4179-4187. On line: [Link](#) [Checked: 20/12/2021].
- Lazarev, Grigori. “Les Šanhāja du Maghreb Central aux X^e-XI^e siècles.” *Al Irfan* 5 (2020): 35-47
- . *Les populations et les territoires du Maghreb du VII^e au XI^e siècle (650-1050). Quatre siècles de géohistoire au Maghreb*. Rabat: Académie du Royaume et Association de Recherche Al Idrissi, 2021. 483 pp.+21 maps.
- Le Bonniec, Henri. *Pline l’Ancien. Histoire naturelle. Livre XVIII*. Paris: Les Belles Lettres, 1972. 337 pp.
- Lewicki, Tadeusz. “À propos d’une liste de tribus berbères d’Ibn Ḥawḳal.” *Folia Orientalia* 1 (1959): 128-135.
- . “Du nouveau sur la liste de tribus berbères d’Ibn Ḥawḳal.” *Folia Orientalia* 13 (1971): 172-200.
- Liverani, Mario. “La struttura sociale dei Garamanti in base alle recenti scoperte archeologiche.” *Rendiconti dell’Accademia Nazionale dei Lincei* 18/2 (2007): 155-204.
- . “Technological innovations transfer through the Hyper-Arid Belt.” In Chloe Duckworth, Aurélie Cuénod & David J. Mattingly eds. *Mobile Technologies in the Ancient Sahara and Beyond*. Cambridge: Cambridge University Press and The Society for Libyan Studies, 2020. *Trans-Saharan Archaeology*. Volume 4: 53-67.
- Marçais, William. “Comment l’Afrique du Nord a été arabisée.” *Annales de l’Institut d’études orientales (Faculté des Lettres d’Alger)* 4 (1938): 1-21. Reprinted in William Marçais. *Articles et conférences*. Paris: Adrien Maisonneuve, 1961. 171-192.
- Martínez Enamorado, Virgilio. “Crónica de al-Ándalus en La Serranía. De los nombres de sus gentes y sus lugares (I): Lo que quedó de los banū Ifran en la Serranía de Ronda (1).” *Takurunna. Anuario de Estudios sobre Ronda y La Serranía* 3 (2013a): 363-374.
- . “Análisis de la toponimia medieval de Mijas y su distrito.” *IV Jornadas de Historia e Etnografía Villa de Mijas. Conferencias, Colección Osunillas*. Mijas: Museo Histórico Etnográfico de Mijas, 2013b, 259-267.

- . “Memoria toponímica de los Šinhāya en el Havaral: una presencia previsible.” *Al Irfan* 5 (2019a). Dossier monográfico *Imazighen, del Magreb a al-Ándalus*.
- . “Y ya no pasaban como guerreros sino como pobladores con sus mujeres e hijos. Una propuesta de tabla sobre la geografía tribal de la Serranía de Ronda.” In Virgilio Martínez Enamorado & Francisco Siles Guerrero eds. *Actas del II Congreso Internacional de Historia de la Serranía de Ronda: Entre al-Andalus y los inicios de la Edad Moderna (siglos VIII-XVI). Anejos de Takurunna. Anuario de Estudios sobre Ronda y la Serranía* 2 (2019b): 131-148.
- . “Una propuesta de tabla sobre la geografía tribal de la Serranía de Ronda.” *Actas II CIHSR - Anejos de Takurunna* 2 (2020): 131-148.
- Martínez Enamorado, Virgilio & Juan Antonio Chavarría Vargas. *Toponimia mayor de la Serranía de Ronda*. Málaga: La Serranía, 2010. 336 pp.
- Martínez Enamorado, Virgilio; José María Gutiérrez López & Luis Iglesias García. “Migración de tribus imaziguen y distritos en el Oriente de la cora de Sidonia (kūrat Šidūna). Una valoración desde la arqueología social.” In José María Gutiérrez López & Virgilio Martínez Enamorado eds. *A los pies de Matrera (Villamartín, Cádiz). Un estudio arqueológico del Oriente de Šidūna*. Villamartín: La Serranía / Obra Social “La Caixa” / Ayuntamiento de Villamartín, 2015. 267-412.
- Martínez Enamorado, Virgilio & Grigori Lazarev. “Les Madyūna: la dispersion d’une tribu berbère (amazigh) oubliée, de la Libye à la Catalogne. La reconnaissance du site d’une de leurs villes anciennes dans le nord du Maroc.” *Hespéris-Tamuda* 54 (2) (2019): 67-99.
- Mattingly, David J. “Who shaped Africa? The origins of agriculture and urbanism in Maghreb and Sahara.” In Niccolò Mugnai, Julia Nikolaus & Nick Ray eds. *De Africa Romaque. Merging Cultures across North Africa*. London: Society for Libyan Studies, 2016. 11-25.
- . “The Garamantes and the origins of Saharan trade: state of the field and future agendas.” In David J. Mattingly, Victoria Leitch, Chloe Duckworth, Aurélie Cuénod, Martin Sterry & Franca Cole eds. *Trade in the Ancient Sahara and Beyond*. Cambridge: Cambridge University Press, 2017. *Trans-Saharan Archaeology*. Volume 1: 1-52.
- M’Charek, Ahmed. “Sanhaja.” *Encyclopédie Berbère*. Aix-en-Provence/Paris: IREMAM/INALCO/AIBL/Peeters, 2019. Vol. 42: 7211-7218.
- Meouak, Mohamed. *La langue berbère au Maghreb médiéval. Textes, contextes, analyses*. Leiden: Brill, 2015. 478 pp.
- . “Anthroponymie et toponymie berbères dans *al-Tašawwuf ilā riġāl al-tašawwuf* d’Ibn al-Zayyāt al-Tādilī (ob. 1230-1).” In Mena Lafkioui & Vermondo Brugnatelli eds. *Written Sources about Africa and their Study / Le fonti scritte sull’Africa e i loro studi*. Milan: Biblioteca Ambrosiana/Centro Ambrosiano, 2018a, 103-126.
- . “Place-names and personal names in medieval Maghreb: Some observations on Arabic and Berber in contact.” *Acta Onomastica* 59 (2018b): 142-154.
- Miguel-Ibáñez, María Paz de. *La maqbara de Pamplona (s. VIII): Aportes de la osteoarqueología al conocimiento de la islamización en la Marca superior*. PhD directed by Sonia Gutiérrez Lloret and Mauro S. Hernández-Pérez. Alacant: Universitat d’Alacant, 2016. 652 pp.
- Modéran, Yves. *Les Maures et l’Afrique romaine (IV^e-VII^e siècle)*. Rome: École Française de Rome, 2003. 900 pp.
- Moll, Francesc de Borja. *Gramàtica històrica catalana*. València: Universitat de València, 2006. 436 pp. 1952 (1st ed.) in Castilian Language.

- Morizot, Pierre. "Awerba." *Encyclopédie Berbère*. Aix-en-Provence/Paris: IREMAM/INALCO/AIBL/Peeters, 1990. Vol. 8: 1192-1196. On line: [Link](#) [Checked: 20/12/2021].
- Mourigh, Khalid. *A Grammar of Ghomara Berber (North-West Morocco)*. Cologne: Rüdiger Köppe Verlag, 2016. xviii+443 pp.
- Múrcia, Carles. *La llengua amaziga a l'antiguitat a partir de les fonts gregues i llatines*. Barcelona: Institut Mòn Juïc / Promocions i Publicacions Universitàries, 2011a. 2 vols.
- . "Que sait-on de la langue des Maures? Distribution géographique et situation sociolinguistique des langues en Afrique Proconsulaire." In Coline Ruiz-Darasse & Eugenio Luján eds. *Contacts linguistiques dans l'Occident méditerranéen antique (actes du colloque de Madrid, 23-24 avril 2009)*. Madrid: Collection de la Casa de Velázquez, 2011b. 103-127.
- . "Diachronie et aménagement de l'amazighe." *Asinag* 11 (2016): 47-87.
- . "Compte rendu d'un ouvrage récent de Ferran Esquilache." *Études et Documents Berbères* 44 (2020): 219-223.
- . *Gramàtica amaziga. Estàndard del diasistema amazic septentrional*. Barcelona: Edicions de la Universitat de Barcelona, 2021. 334 pp.
- . "Contribution of Latinisms of Paleo-Amazigh to the knowledge of the history of both Latin and Amazigh languages." In Ouahmi Ould-Braham & Lameen Souag eds. *Actes du premier colloque Approches pour l'histoire de la langue berbère (Paris, 19-21 décembre 2020) – Études et Documents Berbères* 45-46 (2022a): 299-314.
- . "Els garamants, una civilització paleoamaziga als confins del limes de l'Àfrica romana." *Ítaca. Quaderns catalans de cultura clàssica* 37 (2022b): 29-51.
- . "The puzzle of Amazigh diachronic linguistics." In Helena de Felipe & Miguel Ángel Manzano eds. *MAGNA. Una geografia cultural y humana del Màgreb*. Granada: Editorial Comares, 2022c. 101-119.
- . "A note on names in O. Assenammat inv. 63/4400A." In Rodney Ast, Tino Licht & Maria Chiara Scappaticcio eds. *Proceedings of the conference Uniformity and regionalism in Latin writing culture in the First Millenium of the common era (Heidelberg, 28-29 September 2017)*. Wiesbaden: Harrassowitz Verlag, 2022d. 55-57.
- Múrcia, Carles & Salem Zenia. *Diccionari català-amazic / amazic-català. Estàndard del diasistema amazic septentrional*. Barcelona: Llibres de l'Índex, 2015. CCII+1179 pp. The on-line version of this dictionary is available since 2017 on line: [Link](#) [Checked: 20/12/2021].
- Naït-Zerrad, Kamal, Salim Lounissi & Salem Djemai. *Numérisation du lexique arabo-berbère d'Ibn Tunart élaboré à partir des manuscrits de la Médiathèque de la MMSH-IREMAM*. Université Aix-Marseille, IREMAM, INALCO and LACNAD, 2020. On-line publication available on the website: [Link](#) [Checked: 20/12/2021].
- Obrador, Bartomeu, Joan Carles de Nicolás & Carles Múrcia. "L'epigrafia antiga dels hipogeus de l'illa de Menorca i la seva antroponímia." *Pyrenae. Journal of Western Mediterranean Prehistory and Antiquity* 51/2 (2020): 31-67.
- Oliver Asín, Jaime. "En torno a los orígenes de Castilla. Su toponimia en relación con los árabes y los bereberes. Discurso leído en el acto de su recepción pública." Madrid: Real Academia de la Historia, 1974. 92 pp.
- OnCat* = Coromines 1989-1997.
- Ortega Pérez, María Jesús. *Origen y evolución del paisaje histórico de la llanura de Valencia: estudio de la estructuración y ocupación del territorio entre las épocas ibérica y feudal (siglos V a.C. - XIII d.C.)*. València: Museu de Prehistòria de València, 2020. 212 pp.

- Puigvert, Xavier. “Àger, un topònim berber a la Marca Superior d’Al-Andalus.” *Faventia* 16 (1) (1995): 73-85.
- Pujades, Ramon J. *Les cartes portolanes: la representació medieval d’una mar solcada*. Barcelona: Lunwerg, 2007. 528 pp.
- Putten, Marijn van. “Introducción al estudio diacrónico del bereber.” In José Juan Batista Rodríguez ed. *Estudios sobre toponimia canaria prehispánica*. La Laguna: Academia Canaria de la Lengua, 2019. 225-307.
- Rackham, Harris. *Pliny. Natural history*. London: Heinemann, 1961. 544 pp.
- Rubiera, María Jesús. *La taifa de Dénia*. Alacant: Universitat d’Alacant/Institut Alacantí de Cultura Juan Gil-Albert, 1986. 172 pp.
- . “La conquesta de València per Jaume I com a tema literari en un testimoni de l’esdeveniment: Ibn al-Abbār de València.” *L’Aiguadolç* 7 (1988): 33-44.
- Rubiera, María Jesús & Mikel de Epalza. *Els noms àrabs de Benidorm i la seua comarca*. Alacant: Ajuntament de Benidorm/Universitat d’Alacant, 1985. 65 pp.
- Sanchis Guarner, Manuel. *Aproximació a la història de la llengua catalana*. Barcelona: Salvat, 1980. 251 pp.
- Sarr, Bilal. “Quant on parlait le berbère à la cour de Grenade: quelques réflexions sur la berbèrité de la taifa ziride (al-Andalus, XI^e siècle).” *Arabica* 63 (2016): 235-260.
- . “Los bereberes sí invadieron la frontera superior de al-Ándalus (ss. VIII-XII).” In Hassan Laaguir ed. *Los bereberes en la Península Ibérica. Contribución de los Amazighes a la historia de Al-Ándalus*. Granada: Editorial Universidad de Granada, 2021. 157-183.
- Selma, Sergi. “Toponímia tribal i clànica d’origen berber al nord de Sharq al-Andalus: recull i noves propostes.” *Estudis Castellonencs* 5 (1992-1993): 459-466.
- Simonet, Francisco Javier. *Glosario de voces ibéricas y latinas usadas entre los mozárabes*. Madrid: Tipografía de Fortanet, 1888. CCXXXVI + 628 pp. Reprint: Beirut: Librairie du Liban, 1975.
- Souag, Lameen. “Maltese and North African linguistics: Common roots and areal divergence.” In Slavomír Čéplö & Jaroslav Drobný eds. *Maltese linguistics on the Danube - Studia Typologica* 24. Berlin: Walter De Gruyter, 2020. 3-26.
- Tahiri, Ahmed. “Origen de los bereberes y su impacto en la estructura social de Al-Ándalus.” In Hassan Laaguir ed. *Los bereberes en la Península Ibérica. Contribución de los Amazighes a la historia de Al-Ándalus*. Granada: Editorial Universidad de Granada, 2021. 21-48.
- Torró, Josep. “Les regions orientals d’al-Àndalus abans de la conquesta catalanoaragonesa. Una visió general.” *Catalan Historical Review* 5 (2012): 143-157.
- Trousset, Pol. “Nefzaoua: Antiquité.” *Encyclopédie Berbère*. Aix-en-Provence/Paris: IREMAM/INALCO/AIBL/Peeters, 2012. Vol. 33: 5382-5389. On line: [Link](#) [Checked: 20/12/2021].
- Wilson, Andrew I. “Saharan exports to the Roman world,” in David J. Mattingly, Victoria Leitch, Chloe Duckworth, Aurélie Cuénod, Martin Sterry & Franca Cole eds. *Trade in the Ancient Sahara and Beyond*. Cambridge: Cambridge University Press, 2017. *Trans-Saharan Archaeology*. Volume 1: 189-208.
- Wilson, Andrew I., David J. Mattingly & Martin Sterry. “The diffusion of irrigation technologies in the Sahara in antiquity.” In Chloe Duckworth, Aurélie Cuénod & David J. Mattingly eds. *Mobile Technologies in the Ancient Sahara and Beyond*. Cambridge: Cambridge University Press and The Society for Libyan Studies, 2020. *Trans-Saharan Archaeology*. Volume 4: 68-114.